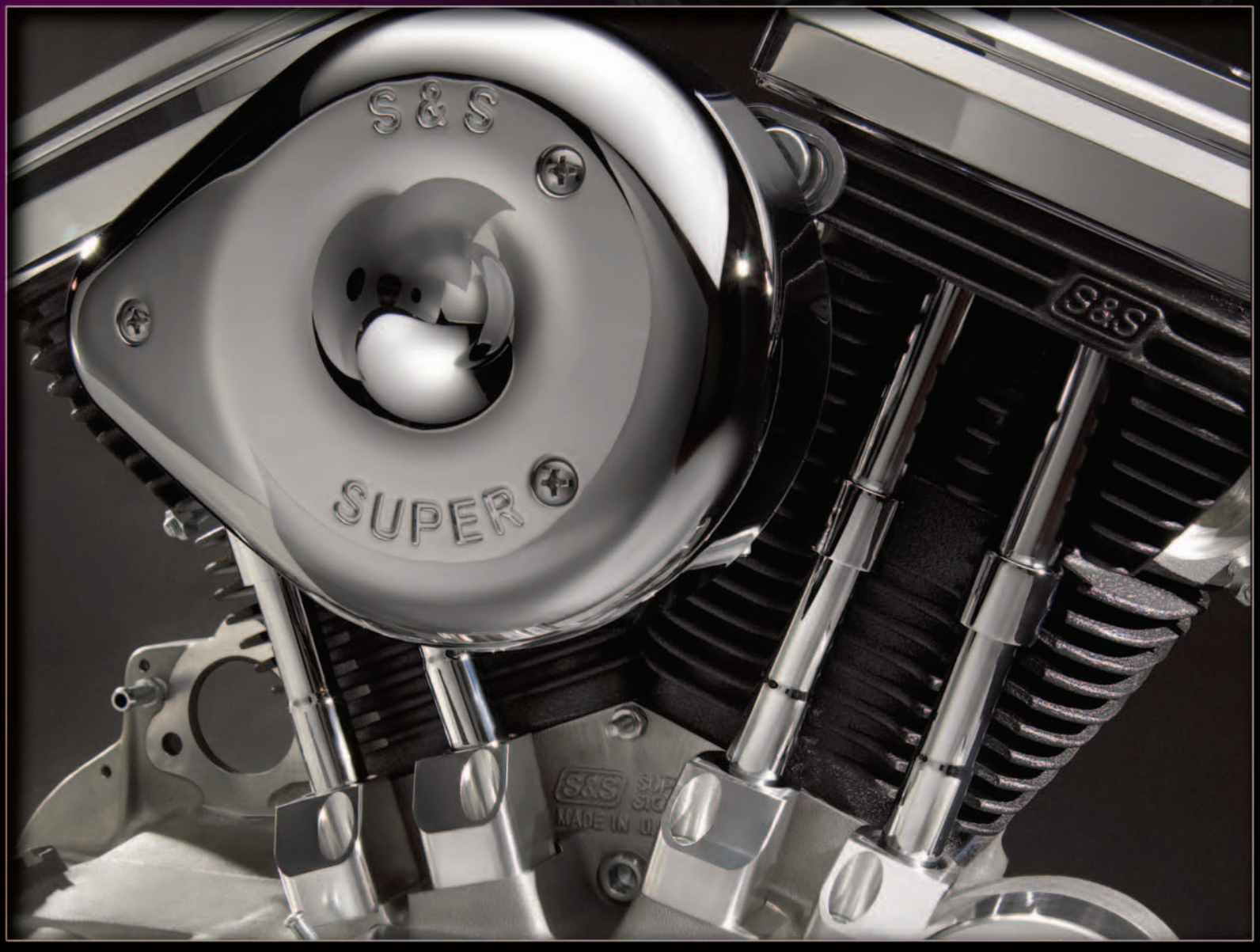

Sportster & Buell

S&S Performance Guide 2005 – Performance is in stock at your local S&S Dealer!

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The most popular performance carbs for Harleys in the world. Also, get our new air cleaner covers and air filter elements for your Super E & G Carb.

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Meeting the needs of high performance engines.

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S&S valve spring kits are designed to simplify high-lift cam installation.

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One of the most important things that needs to be done to get more horsepower out of any engine is to get more air into it. S&S can help.

Rocker Covers **Pages 34-35**
S&S manufactures two types of rocker covers for V² style engines, billet and die-cast.

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S&S forged roller rocker arms or new forged standard rocker arms.

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The S&S Speedometer Calibrator allows the rider to correct Harley-Davidson® electronic speedometers easily.

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We've just updated our website.

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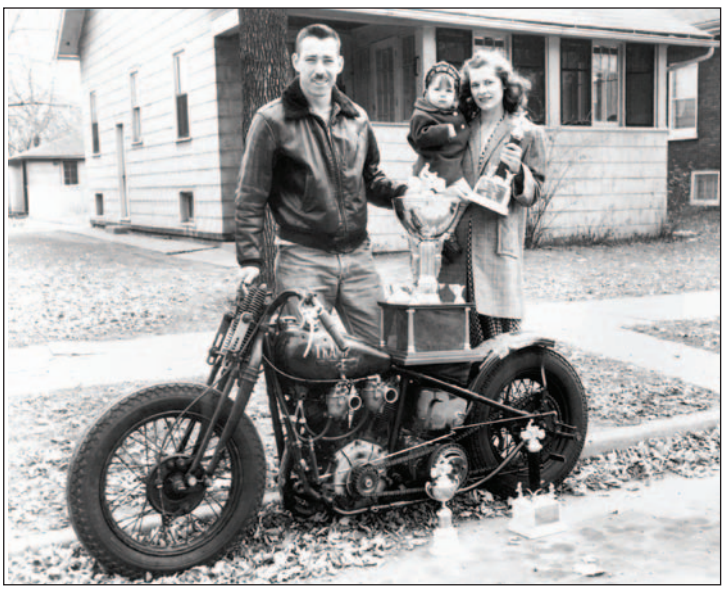
Are you fast enough to join?

America's Engine Builder

Ask American V-Twin enthusiasts to name one manufacturer of high performance engines, and nine times out of ten they'll say S&S! And you gotta' wonder about the one guy who didn't. S&S is the largest manufacturer of engines for the V-Twin high performance aftermarket. S&S engines power more custom V-Twins than anyone else's, and they have always been popular as a high performance upgrade in stock motorcycles. What could be simpler? Take your old engine out, and put a new S&S engine in. It's just that simple, and you have a sleeper hog that will run the wheels off the competition. The reason that S&S engines are so popular can be summed up in two words: "Proven Performance".

These industry awards pretty much tell the story. S&S engines have been receiving awards from industry magazines for years. Some that we are most proud of are the "Engine Of The Year" awards from both Hot Bike and V-Twin magazines for the S&S 124 and Tribute 145 engines.

VISIT US AT WWW.SSCYCLE.COM



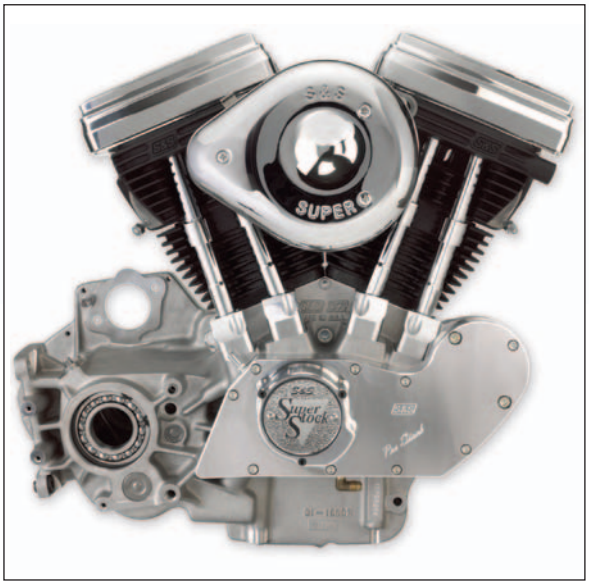
When you stop and think about it, the trophies that company founder George Smith won at the race track in the late 1940's early 1950's were awards that really tell you what S&S is all about . . . Proven Performance.

Performance and Reliability

Everybody knows that S&S engines make a lot of power. What you may not be aware of is that because of our innovative designs and premium materials, they last a lot longer than you might think was possible for a high performance engine. Let's face it, the stroker engines of the late 1960's and early 1970's were pretty crude by today's standards, and they gave high performance motors a bad reputation as far as engine life is concerned. But keep in mind that the high performance industry has come a long way in the last 35 years or so, and S&S has been a leader in the quest not only for more power, but also for greater dependability and improved engine life. So if you could double your horsepower and still get near stock engine life, wouldn't that be a fair trade off? Judging from the number of large displacement S&S engines on the street, the answer seems to be "Yes!".

S&S 91" & 100" Sportster & Buell Style Engine

S&S complete Engines for Sportsters and Buells are available in 91" and 100" displacements. The 91" engines have 3⅝" stroke with a 4" bore. Cylinder length is stock so the engine fits in all frames with little or no modification. Compression ratio of the 91" engine is 9.5:1. The 100" engine has 4" stroke with a 4" bore. Cylinder length is .260" taller than stock. The 100" engine will generally fit in stock Sportster frames with no modification, but due to the increased cylinder length, requires the S&S billet motor mount to fit in the Buell chassis. Exhaust modifications may also be required to gain frame clearance when installing a 100" engine in a Buell frame. Compression ratio of the 100" engine is 10.3:1. Crankcases have 1986-'90 (four-speed) style cam geometry, 1991-up (five-speed) style driveside, and are available only in natural aluminum finish. Primary components, charging system, ignition system, oil pump, and transmission components are not included.



Complete Sportster and Buell Engines Include:

- Special Application XL or Buell style crankcases.
- Complete S&S flywheel assembly.
- S&S Super Stock™ cylinder heads.
- S&S cylinders and pistons.
- S&S 555 camshaft set and required gearcase components.
- Adjustable pushrods and pushrod cover assemblies.
- S&S billet tappet guides with hydraulic tappets.
- Super G carburetor kit.
- S&S gear billet XL style cover kit.
- S&S billet aluminum rocker covers and roller rocker arms.

Options Include:

- Natural aluminum or black powdercoat finished cylinders and heads.
- Unfinished, polished, or chrome plated billet rocker covers.
- Assembled by S&S technicians or unassembled.

Notes:

- The S&S billet motor mounts are required for installaton of the 100" Buell style engines due to the increased engine height. Although the 91" engine can be installed with a stock Buell motor mount, we recomend the S&S billet mounts to be used for the increased strength.
- The S&S Sportster and Buell style engines do not include drive train components or charging system. Engine builder must supply 1991 and later style (5-speed) transmission, clutch, primary components, and charging system.
- Stock or aftermarket 1986 and later Sportster style oil pumps may be used. 1986-'87 bolt-on oil filter mount is also required.

S&S Complete Engines for Sportsters

Engine, complete, 100" Sportster **31-9299**

Engine, complete, 91" Sportster **31-9302**

S&S Complete Engines for Buells

Engine, complete, 100" Buell* **31-9301**

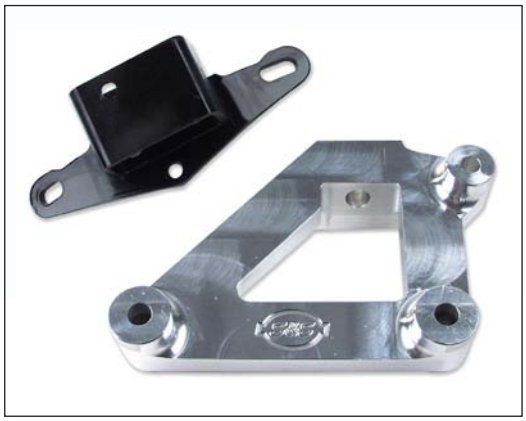
Engine, complete, 91" Buell **31-9300**

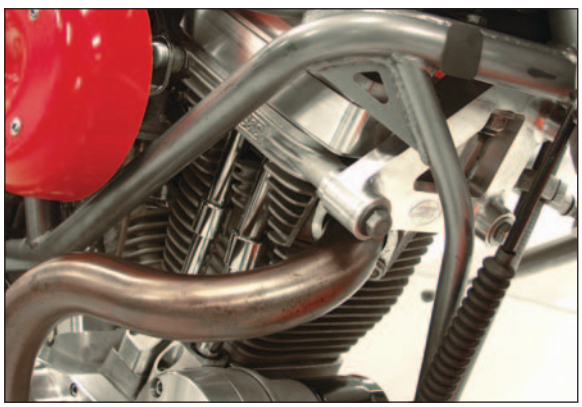
* Requires S&S billet motor mount.
Frame to exhaust clearancing may be required.

S&S Billet Motor Mounts for Buells

S&S billet front motor mounts for 1996 -'02 V-Twin Buell motorcycles are machined from 6061-T6 billet aluminum and offer a considerable increase in strength over stock. They are available in three versions. The first version is intended to be a heavy duty replacement motor mount for Buells with stock height engines. The second version is designed to allow the S&S 100" engine to be installed in a stock Buell chassis. A special order front motor mount is also available. The special order front motor mount allows builders to install custom engines which are between .200" shorter and .430" taller than stock. Keep in mind that when installing some non-stock height engines in a stock Buell chassis, exhaust and frame clearance may be a problem.

A slotted steel top motor mount is also required for taller than stock engines.





S&S Front Motor Mounts

for 1996 -'02 V-Twin Buells

For Stock Height Engines.....**93-4059**

For S&S 100" Engines.....**93-4060**

Special Order **93-4061**

Slotted Steel Top Motor Mount.....**93-4062**

S&S Slip-On Performance Mufflers

One of the most popular and cost effective performance upgrades you can make to a Harley-Davidson® motorcycle is to replace the stock exhaust with a set of low restriction, high performance mufflers. The stock exhaust pipes and S&S performance mufflers make a great high performance exhaust system with a low price tag.

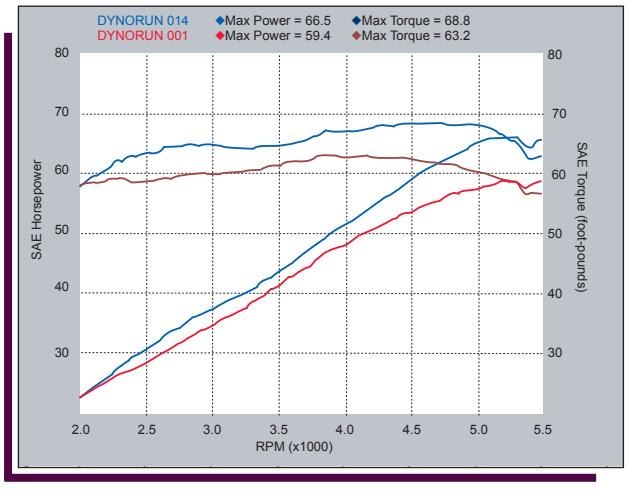
1987-'03 Sportster Style -- Chrome 55-6008

New for 2005!

S&S High Performance Exhaust for 2004-Up Sportsters

S&S introduces a new high performance exhaust for 2004 and later Sportsters. These mufflers slip on to the stock header pipes, and are similar in design and performance to the S&S Mufflers for 1987-2003 Sportsters. However they are designed to be a direct replacement for stock 2004-up XL style mufflers and connect to the crossover pipe built into the stock muffler support bracket.

2004-up Sportster Style -- Chrome 55-6031



This dyno chart compares the performance of a 1200 XL with stock exhaust and S&S Super E carburetor with the same bike after installing the S&S Slip-On Performance Mufflers. Seven more horsepower and over five more ft/lb of torque. That is a very cost effective increase in performance.

Dyno results from Dyno Jet 150 chassis dynamometer at S&S Cycle's Research and Development facility.

S&S Slip-On Muffler Kits

1987-'03 Sportster Style, Chrome **55-6008**

2004-up Sportster Style, Chrome **55-6031**

NOTES:

- It may be necessary to rejet the carburetor or recalibrate the fuel injection system for best performance when a change is made in the exhaust system.
- Dyno results are from tests performed on a DynoJet 150 dynamometer at the S&S Research and Development facility in Viola, Wisconsin.
- S&S performance mufflers are designed for closed course competition motorcycles only and do not conform to U.S. EPA noise emission standards. Use on motorcycles subject to EPA noise regulations constitutes tampering and is a violation of federal law unless it can be shown that use does not cause the motorcycle to exceed applicable federal standards.

Air Cleaner and Exhaust Hot Set Up Kits

NEW product

Okay, so maybe your budget isn't ready for a new big inch S&S engine yet. But better performance is still within your reach. Consider the NEW S&S Muffler and Air Cleaner Hot Set Up Kits. For under $500 you can gain more than 10 horsepower. Dollar for dollar, that's about as good as it gets. The big motors will be there when you're ready, but in the mean time why not pick some low hanging fruit and get more power right now?

1987-Up Sportsters 55-6500

S&S Exhaust and Air Cleaner Hot Set Up Kits...

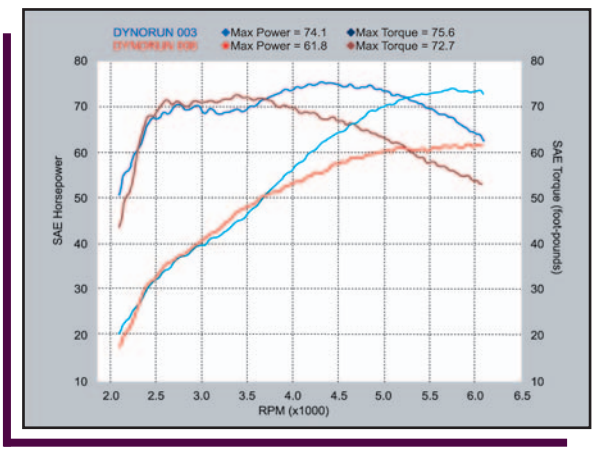
are the perfect way to balance the performance budget. Kits include a set of S&S performance mufflers and a high flow S&S air cleaner that will fit on either a stock carburetor. A jet kit is also included for maximum power gains and improved drivability.

Air Cleaner and Exhaust Hot Set Up Kits

1987-'03 Sportsters **55-6500**

2004-up Sportsters **55-6501**

2004-Up Sportsters 55-6501



2004 Sportster

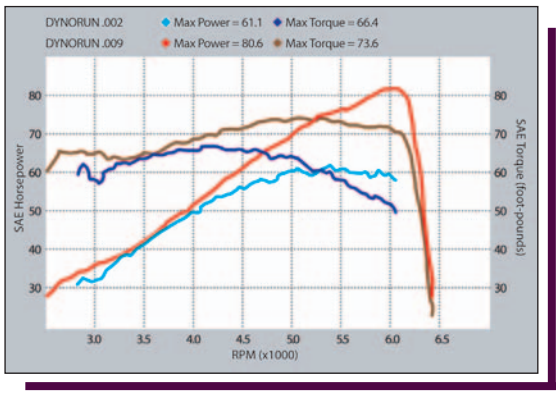
This dyno comparison show the gains in horsepower and torque that can be had with these simple "bolt on" kits.

Tests were conducted on a DynoJet 250 chassis dynamometer at the S&S Research and Development facility in Viola, Wisconsin.

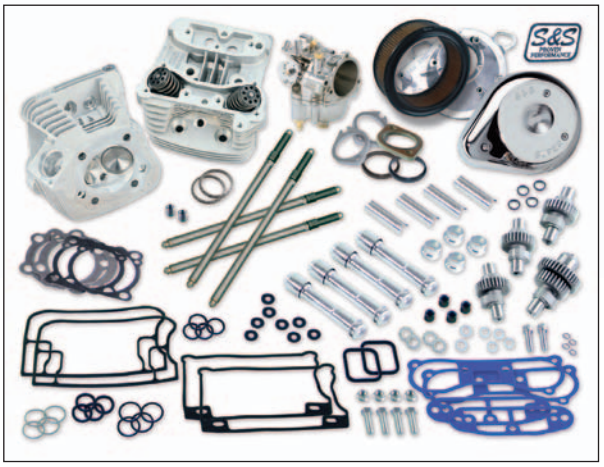
74 XLSS Hot Set Up Kit
Includes S&S Super Stock™ Cylinder Heads

For Evolution Sportsters.

This Hot Set Up puts some "sport" in your Sportster. Turns any 883cc, 1100cc, or 1200cc Sportster into a potent 74 inch street bike. The combination of S&S Super Stock™ heads and an aggressive cam profile produce a power curve that is ideal for the light weight of the Sportster. All components are carefully selected for performance and dependability. Flywheel rebalancing is not required in stock 833cc and 1200cc engines.



Dyno results from Dyno Jet 150 Chassis dynamometer at S&S Cycle's Research and Development facility in Viola, WI.



The 74XLSS Hot Set Up

yields 74 cubic inches, and is available in compression ratios of 9.2:1 and 10.5:1. Kit includes a Super Stock™ cylinder head kit with valves and springs installed, manifold with o-rings and flanges, required hardware, top end gaskets, .500 lift cams, adjustable chrome moly pushrods, an HL_2T kit, a Super E carb kit, and installation instructions.

S&S pistons must be ordered separately.

S&S 74" Hot Set Up Kits
For Evolution Sportster Engines

Model Year	Kit Number Black	Kit Number Natural
1980-'90	90-0326	90-0324
1991-up	90-0327	90-0325

NOTE:
Pistons are available for 883 and 1200 cc engines that do not require rebalancing of the stock flywheels. Flywheels for the 1100cc engines should be rebalanced.

This kit requires special S&S pistons.
Order the correct piston oversize from these charts.

92-2016 Series Pistons
74" XL S&S Heads 10.5:1 Compression
No rebalancing for 1200cc.

Oversize	Part Number
Standard	92-2016
+.005	92-20165
+.010	92-2017
+.020	92-2018
+.030	92-2019
Cylinder & Piston Kit - Natural	91-3014
Cylinder & Piston Kit - Black	91-3908

92-2056 Series Pistons
883 to 1200XL V² S&S Heads 10.5:1 Compression
No rebalancing for 883cc.

Oversize	Part Number
Standard	92-2056
+.005	92-20545
+.010	92-2057
+.020	92-2058
+.030	92-2059
Cylinder & Piston Kit - Natural	91-3012
Cylinder & Piston Kit - Black	91-3906

92-2036 Series Piston

89 XL Hot Set Up Kit
Sidewinder™/Stroker Kit 89"

For Evolution Sportsters with Stock H-D Cylinder Heads.

The 89XL Hot Set Up is based on the S&S 89" XL Sidewinder™ which is the largest practical motor that will fit into the stock Sportster chassis with only minor modifications. This kit is for the serious street performance and competition rider. Our Hot Set Up 89 has gained a hard-earned reputation as the "Giant Killer".

Stock crankcases must be bored to accept the 3⅝" big bore cylinders. Sportsters 1991-up require conversion to the 1986-'90 style pushrod cover assemblies. Pushrod adapters are included.

89" XL Hot Set Up

.....**32-3089**

89 XL Hot Set Up...

yields 89 cubic inches with a compression ratio that is determined by the extent of modification to stock cylinder heads. Hot Set Up includes an 89" Sidewinder™ kit with 4⅝" stroker flywheels assembled with mainshafts and connecting rods, S&S 3⅝" bore Sidewinder™ cylinders and pistons complete, a valve spring kit, an HL_2T kit, head bolts, pushrod cover keepers, front and center engine mounts, a Super E carb kit, and installation instructions.

Renee...

Renee started riding dirt/mini bikes when she as 10 years old. Growing up on a dairy and quarter horse farm, she snuck her first mini bike home in the back of a friend's boat, kept it hidden in the woods and stole chainsaw gas from her dad. However, her secret only lasted a month or two. After selling her horses (four legged kind), she purchased a new 883 XL in 1987 and that bike now has 55,000 miles on it. Also in her stable is a 1989 heitage softail with an S&S carb. Renee has been at S&S Cycle for 6 years and works in the Sales Department selling horsepower.

89 XLSS Hot Set Up Kit
Sidewinder™/Stroker Kit 89"

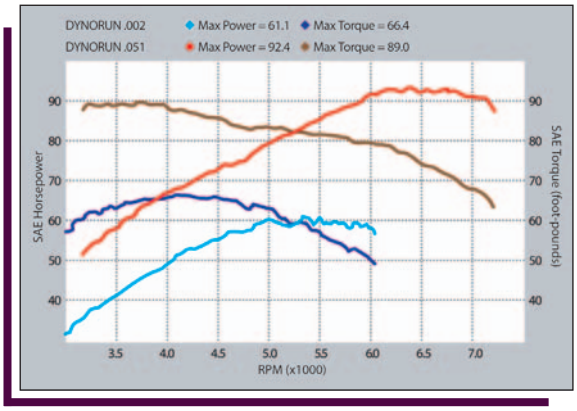
For Evolution Sportsters
Includes S&S Super Stock™ Cylinder Heads.

Adding S&S Super Stock™ heads to the popular 89XL kit takes performance to the next level. This is the biggest Hot Set Up kit we offer for Sportsters. Not for the faint of heart! Stock crankcases must be bored to accept the 3⅝" big bore cylinders. Sportsters 1991-up require conversion to the 1986-'90 style pushrod cover assemblies using adapters provided. Some frames may require minor clearancing.

89 XLSS
Hot Set Up Kits

9.5:1 Compression Ratio 90-0389

10.2:1 Compression Ratio.....90-0352



This dyno chart shows the performance gains of an 89" XLSS Hot Set Up over a stock 1200cc Sportster.

Dyno results from Dyno Jet 150 Chassis dynamometer at S&S Cycle's Research and Development facility in Viola, Wisconsin.

The 89 XLSS Hot Set Up...

yields 89 cubic inches at 9.5:1 or 10.2:1 compression and includes 4⅝" stroker flywheels assembled with mainshafts and connecting rods, 3⅝" bore Sidewinder™ cylinders and pistons complete, a Super Stock™ cylinder head kit with valves and springs installed, manifold with o-rings and flanges, required hardware, top end gaskets, .500" or .550" lift cams, adjustable chrome moly pushrods, an HL_2T kit, head bolts, pushrod cover keepers, pushrod tube adapters (1991-up kit only), front and center engine mounts, a Super E carb kit, and installation instructions. Select kit with desired compression ratio, and specify model year and carburetor preferred.

S&S SIDEWINDER™ BIG BORE AND STOCK BORE STROKER KITS

S&S stock bore stroker kits and Sidewinder™ 3⅝" big bore kits are designed to increase the displacement of an existing stock engine. More cubic inches means more power but in addition to horsepower gains, reliability, ease of installation, and compatibility with stock components are also important considerations to our customers. With an S&S kit, you can build a performance street engine with confidence. Our years of experience add up to proven performance.

Shown here is the 89" V2 Sportster Kit. Typical Sidewinder™ stroker kits include everything necessary for a complete installation.

91-3204

FOR ALL OHV BIG TWINS AND SPORTSTERS.

The easiest, most cost effective way to increase the performance of your Harley.

- Increased displacement for better performance.
- Maximum running life through innovative design features and premium materials.
- Flexibility for a variety of performance needs.
- Minimal installation problems.

KIT SELECTIONS

There is kit available to match nearly any riding style—for touring, riding double, sidecar or trailer operation, and drag strip.

- Ironhead Sportster 72" or 74"
- Sportster V²s from 74" to 103"
- Buells 74" to 79"

SELECTION CONSIDERATIONS:

- Lower compression kits will tolerate lower quality gasoline and generally last longer than higher compression kits.
- Cast pistons generally allow tighter running clearances for extended life and quieter operation.
- Forged pistons are noted for strength and durability in high performance applications.
- Engine Size - Smaller displacements retain stock-like engine life while providing significant additional horsepower. Larger, higher compression kits provide greater horsepower gains with some reduction of engine life.

STOCK COMPATIBILITY

- Oil feed and oil return systems to and from heads match the stock systems.
- All kits are made to work with stock components and come complete so it is not necessary to buy other aftermarket parts.
- An almost deceptive stock-like appearance!

EASE OF INSTALLATION:

- All kits can be installed by any H-D repair shop doing engine rebuilding who has access to a boring bar, no sophisticated machine shop facilities are required.
- Most kits come complete with all parts necessary to make the conversion.

Continued...

S&S Sidewinder Big Bore and Stock Bore Stroker Kits

S&S Sidewinder™ Big Bore and Stock Bore Stroker Kits

General Information

The S&S stock bore stroker kits described and pictured in this section are available for Ironhead Sportster engines. S&S big bore Sidewinder™ kits are available for Evolution Sportster engines. All kits include complete installation instructions which detail the model-specific modifications sometimes required. Additional information pertaining to basic engine assembly procedures and recommended running clearances is available in the appropriate Harley-Davidson Factory Service Manual.

74" Kit for 1972-'85 Sportsters includes a set of stroker flywheels, a pair of stroker pistons complete with rings, wristpins, buttons , and installation instructions.

Making It All Work...

Sidewinder™ and stroker kits create large displacement engines which can be difficult to start. This should be kept in mind when considering one of these kits. Using an appropriate cam with longer duration, and later intake closing time to reduce cranking compression will make starting easier. Not only will the appropriate cam make starting easier, but it is necessary in order for the engine to achieve its full potential. We urge you to consider purchasing an S&S Hot Set Up Kit that includes the recommended camshaft. (See pages 8 through 10 of this Catalog or see page 25 for help with camshaft selection.)

A number of options make it easy...

to build big bore and stroker engines to achieve your specific goals.

- Do your own flywheel assembly and balancing or allow S&S to do it for you.
- These kits are available with or without sprocket and pinion shafts and are shipped unassembled or completely assembled and ready to install into the cases. However, Evolution Sportster engines must use S&S mainshafts since stock mainshafts are not reusable.

NOTES :

Rod length varies for Evolution Sportster kits. 79" engines require stock length 6.926" rods. 89" require special 7.113" rods. 96" and larger Evolution Sportster engines require 7.440" rods.

IRONHEAD SPORTSTER STOCK BORE STROKER™ KITS

Displacement	Stroke	Bore	Compression Ratio	Piston Type	Piston Series	Piston Page #	Application	Engine Life	Kit Part Number	EXTRA COST OPTIONS: Pinion Shaft	Sprocket Shaft	Connecting Rod Assembly	Flywheels Assembled
72"	4½"	3 3/16"	8:1	Forged	92-3700	P. 4-50	Short Trips, street & strip	Fair	**32-3772**	●	●	●	●
74"	4⅝"	3 3/16"	9:1	Forged	92-3700	P. 4-50	Short Trips, street & strip	Fair	**32-3774**	●	●	●	●

Order stroker pistons separately. Refer to page listed in chart for correct oversize.

S&S V² SPORTSTER & BUELL BIG BORE SIDEWINDER™ KITS

S&S offers several Sidewinder™ Kits for Evolution Sportsters. The 79" Kit is a top end kit with stock length cylinders and can be used with stock XL flywheels. Rebalancing is neccessary. The 89" Kit is the biggest kit that will fit in a stock frame, and inlcudes a set of 4⅝" stroke S&S flywheels. The 103" Kit requires extensive frame modificatons due to the increased engine height and includes a set of S&S 5" stroke XL flywheels.

V² SPORTSTER & BUELL BIG BORE SIDEWINDER™ KIT SUMMARY CHART

Displacement	Stroke	Bore	Compression Ratio	Compression Ratio	Piston Type	Cylinder Length	Engine Life	Model Year	Kit Part Number
79" **	3 13/16"	3⅝"	9.2:1 or 11.0:1	‡	F	Stock	Stock-like	1986 to present	**91-3002**
89"	4⅝"	3⅜"	9.5:1 or 10.2:1	‡	F	+.437" (5.087")	Very good	1986 to 1990	**91-3204**
								1991 to present *	**91-3206**
103"	5"	3 ⅝"	10.5:1 or 11.8:1	‡	F	+1.100" (5.750")	Poor	1986 to 1990	**91-3504**
								1991 to present *	**91-3506**

NOTES: C - Pistons supplied are cast type. F - Pistons supplied are forged type. – Denotes kit supplied in Hot Set Up.

‡ Compression ratio depends on cylinder head type used. If stock heads are used extensive cylinder head modifications must be performed, making compression ratios completely dependent on final combustion chamber volume.

* 1991 and later engines using adjustable pushrods require conversion to 1986-'90 style pushrod tube assemblies. S&S kits for 1991 and later engines include a special pushrod tube adapter. Pushrod tube assemblies are not included and must be purchased separately.

** This kit has stock height cylinders and will fit Buell motorcycles.

PARTS INCLUDED IN V² SPORTSTER & BUELL BIG BORE SIDEWINDER™ KITS

Displacement	Stroke	Kit Part Number	Flywheels	Pistons	Cylinders	Head Gaskets	Base Gaskets	Head Bolts	Center Head Mount	Front Head Mount	Pushrods	Pushrod Clips	Manifold	Pinion Shaft	Sprocket Shaft	Connecting Rod Assembly
79"	3 13/16"	**91-3002**		F	●	●	●									
89"	4⅝"	**91-3204**	●	F	●	●	●	●	●	●	●	●	●	●	●	●
		91-3206	●	F	●	●	●	●	●	●	●	●	●	●	●	●
103"	5"	**91-3504**	●	F	●	●	●	●	●	●	●	●	●	●	●	●
		91-3506	●	F	●	●	●	●	●	●	●	●	●	●	●	●

NOTES: C - Pistons supplied are cast type. F - Pistons supplied are forged type. – Denotes kit supplied in Hot Set Up.

EXTRA COST OPTION
Flywheels Assembled
●
●
●
●

AN ECONOMICAL WAY TO GET MORE OUT OF YOUR 883 SPORTSTER!

Use these pistons to convert an 883cc engine to 1200cc. Bore the stock 883cc cylinders out to 3½" bore or use 1200cc cylinders. A template is included for modifying stock 883cc cylinder heads to adjust compression and increase flow. It is recommended that flywheels be rebalanced during the next complete overhaul.

92-2446 SERIES PISTONS

Oversize	Part Number
Standard	92-2446
+.005	92-24465
+.010	92-2447
+.020	92-2448
+.030	92-2449

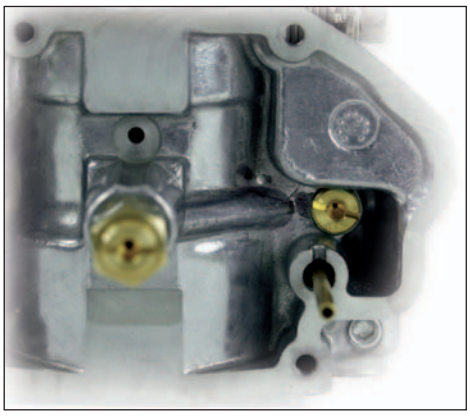
Half a million and still going strong. . .

The S&S Super E & G Carbs...

were a ground breaking development when they were first introduced in October of 1990. Since then they have become the best selling performance carburetor in the V-Twin aftermarket, and have remained so to this day – in mid 2004, S&S produced the 500,000th Super Shorty carb. The combination of good looks, easy tuning, exceptional performance, and not least of all the technical support of a manufacturer with as many years of experience as S&S, made the S&S Super Shorty carbs the ones to get. Today the Super E and G carbs are still top selling carburetors, and are standard equipment on all S&S engines (another best selling product).

So how do you improve on that?

A fairly simple design change has given the Super Shorty carbs an even higher degree of tunability, which improves compatibility with some of the more radical cams and exhaust systems. For the vast majority of our customers, this new design will not change the way they dial in our carbs, but for our customers who use extreme cams and exhaust systems, designed for maximum performance, the change will make life a lot easier.



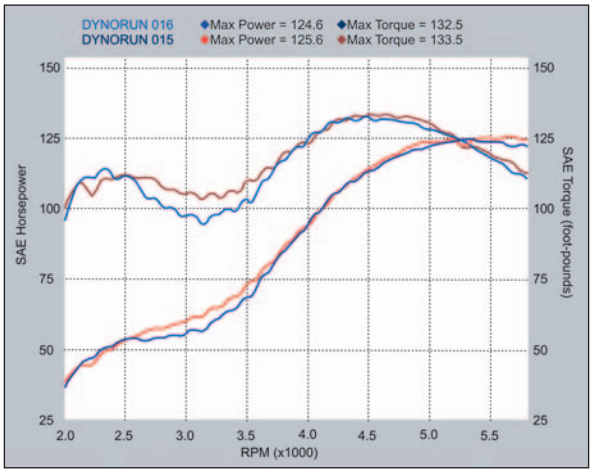
The new replaceable main system air bleed, accepts readily available S&S main jets which allows a wide range of adjustment. Installing a larger air bleed jet causes the main jet to "come in" at a higher rpm, and can help eliminate the transient midrange rich condition when tuning engines with radical cams and exhaust systems.

How does it work?

The design change involves the main fuel circuit air bleed. In the past, S&S Shorty carburetors have had a fixed air bleed for the main circuit that was sized for the best all around performance. However, starting October 1, 2003, all Super E and G carbs have a replaceable jet in place of the fixed main circuit air bleed. This allows for fine tuning of the main circuit. The main circuit air bleed determines the rpm at which the main fuel circuit begins to feed fuel. A smaller air bleed will cause the main circuit to "come in" at a lower rpm. A larger air bleed causes the main jet to come in at a higher rpm. The air bleed installed at the factory is the same size as we have always used because it works best in the majority of applications. However, the ability to change the size of the air bleed can be very useful when tuning engines with high performance exhaust systems, which often, exhibit some harmonic reversion problems. Harmonic reversion usually inhibits exhaust flow at a specific rpm. In extreme cases, aggravated by very aggressive cam timing, the reversion pulses can actually push air back out of the intake valve. This pulse of air picks up fuel as it goes out past the main discharge tube of the carburetor, and is then drawn back through the carburetor where it picks up additional fuel. This causes a transient rich condition at that specific rpm. Since this usually occurs at the same rpm at which the main circuit comes in, the rich condition can often be reduced, and midrange performance improved, by making the main jet come in at a slightly higher rpm. This can be done by installing a larger main circuit air bleed jet.

Do I Need a Super E or Super G Carburetor?

As a general rule we recommend a Super E carb for street engines up to about 100 cubic inches in displacement. The Super E's smaller 1⅞" (47.6mm) bore size creates higher air velocity, which results in better low and midrange response and power. The Super G is recommended for street engines of no less than 90 cubic inch displacement. However, in spite of the fact that the Super G's larger 2⅛" (52.3mm) bore size allows more air to pass, and generally provides more peak horsepower, slower air velocity at lower rpm causes poor throttle response and weaker midrange torque in engines under 100 cubic inches. For the vast majority of street engines in the 90-100 cubic inch displacement range we strongly recommend the Super E because of the improved low and midrange response. However, if maximum peak horsepower is the most important consideration, a Super G carb would be appropriate.



Tune for those Drag Pipes!

This dyno chart shows two runs on a 124" SSW+ engine with a Super G carb and 2" drag pipes. The two runs are very similar except in the 2500 to 3500 rpm range. One run shows approximately 10 ft/lb more torque in this range than the other. The curve with increased torque was the result of replacing the standard .040" main circuit air bleed with a larger bleed. Note that the maximum torque and horsepower was not changed significantly. However, the additional 10 ft/lb of midrange torque will make this motorcycle feel much more responsive and powerful on the street since this is the rpm range most used in street applications.

Dyno results from Dyno Jet 150 Chassis dynamometer at S&S Cycle's Research and Development facility in Viola, Wisconsin.

Notes:

- Throttle cable guides–S&S Super E and G carburetors require the use of a two cable, pull open-pull closed throttle assembly.
- Throttle cables for Sportsters–Any 1980 or earlier stock H-D Sportster chassis including models equipped with a single cable throttle mechanism requires conversion to a two cable, pull open-pull closed type. S&S offers high quality two cable throttle assemblies for this purpose. The long throttle cable guide for use with CV style throttle cables on Big Twins can not be used on Sportster chassis due to clearance problems. As a result, Sportster models 1988-up fitted with a constant velocity (CV) carb require conversion to 1981-1987 "butterfly" style throttle cables. (See Throttle Assemblies section of this catalog for more information.)
- 1998 and later carbureted Buells require the use of 1996 Buell throttle assembly and S&S throttle cables when installing a Super E or G carburetor.
- Super E and G carbs cannot be used on Ironhead Sportster engines equipped with vertical magnetos due to clearance problems.
- Recommended for Racing Only – This carburetor is not legal for use in California on motor vehicles operated on public highways or in other states where similar pollution laws may apply. The user shall determine the suitability of the product for his or her use and shall assume all risk and liability in connection therewith.
- Polishing and Chrome Plating the Carburetor – S&S does not recommend polishing and chrome plating the Super E or G carburetor. Proper preparation to achieve a good finish requires polishing using buffing compounds. The polishing and plating processes and the materials used invariably plug air and/or fuel passageways and feed holes and alter operating tolerances in critical areas regardless of the precautions taken.

What makes the S&S Super E & G so popular?

The popularity of the S&S Super E & G "Shorty" carburetors is largely because of results. Ease of installation, easy tuning, excellent performance, and the technical support of a company with over 45 years of experience in the high performance V-Twin industry are all factors in the popularity of the Super "Shorty" carbs. It can be best summed up by the S&S company motto: "Proven Performance".

Them Changes!

Ann (pictured at right) has been with S&S for eleven years, and currently works as a Current Product Engineering Test Technician. Formerly the supervisor of the cylinder head finishing department, Ann "ports a mean head", and her 1993 Sportster is not one to be trifled with. The engine has gone through a series of changes: from 883 to 1200 to 89" with S&S ported heads. Ann loves to go fast, but she also enjoys going on trips.

Easy Installation

Installation is easy because carbs are sold in complete kits that contain everything needed to install the carb on the specified model motorcycle. All kits include a comprehensive, step by step installation instruction booklet and tuning guide that takes the "rocket science" out of installation and tuning.

Throttle Cable Compatibility

For the sake of safety, all S&S carbs are designed to use a two cable pull open/pull closed throttle system. Super "Shorty" carbs for Sportsters are compatible with stock 1981-'87 throttle cables. Due to inadequate frame clearance the taller throttle bracket can not be used on Sportsters. Therefore, late model Sportsters and Buells require the installation of earlier butterfly style throttle cables.

S&S "Shorty" Carbs...Easy Tuning

The S&S "Shorty" carbs are easy to tune due to the simplicity of the functional design. The Super E & G's are butterfly style carbs and have only two fuel circuits, not counting the starting system or accelerator pump. In addition, idle mixture, idle speed, and accelerator pump adjustments are easily accessible when the carburetor is installed on a motorcycle.

The low speed circuit which handles engine speeds from idle up to about 2500 rpm, is controlled by a changeable intermediate jet which meters fuel to the intermediate system as well as the idle mixture control needle. The intermediate jet is selected to provide the best performance and fuel economy in the lower rpm range, and the idle mixture screw allows for precise adjustment of the air/fuel mixture at idle. The adjustable accelerator pump eliminates off idle hesitation and can be adjusted to provide the correct amount of fuel for a wide variety of engine displacements and styles. The accelerator pump is also very useful as a starting aid.

The main, or high speed system features a replaceable main jet, and in carbs manufactured after 10-1-03, a replaceable main circuit air bleed. The main jet meters fuel for high rpm and full throttle conditions, while the air bleed can be used to control the rpm at which the main system comes into play. Adjustment of the air bleed is normally not needed with standard engine configurations, but can be very useful when tuning engines with radical cams and exhaust systems.

Continued...

S&S Super E & G Carburetors

These S&S Super E & G carburetor kits contain everything you need for a complete installation.

Performance by Design

The S&S "Shorty" carbs do not use a traditional choke plate for starting enrichment. Instead a separate adjustable enrichment circuit is used for cold starts. The enrichment circuit is activated by pulling the enrichment lever on the air cleaner to the up position. Once the engine starts, the lever can be moved downward to function as an adjustable fast idle to keep a cold engine running until the bike is underway or the engine is warm enough to idle normally. By using an enrichment circuit instead of the usual choke mechanism, the bore of the carburetor is not restricted by hardware that is only used on cold starts. That means that the carb can supply more air to the engine at full throttle, and that equates to more power.

Another reason the "Shorty" carbs are capable of making more power is the design of the air cleaner. This design takes into account two of the most significant factors that can improve air flow into a carburetor. The most important factor is a filter element that does not restrict the flow of air, and almost as important is the elimination of turbulence at the inlet of the carburetor.

The filter area of the "Shorty" carbs is maximized by an ingenious backplate design that wraps slightly around the carb to allow room for a wider filter element than a straight back plate would allow. The pleated S&S filter element looks like paper, but is actually a special resin impregnated cellulose fiber media that provides excellent filtration as well as superior flow. That makes for improved performance and better engine protection.

Reducing turbulence is almost as important as finding a filter media that allows air to pass with a minimum of restriction. The shape of the S&S air cleaner backplate provides a radiused inlet similar to an air horn or velocity stack. This provides a smooth path for air to follow while traveling into the carburetor inlet. This results in less turbulence which allows more air to flow into the carb. The flow of air is also enhanced by a directional cone inside the air cleaner cover which also directs the air smoothly into the inlet of the carburetor. Since the radiused inlet and directional cone are contained within the filter element, air flowing into the carb is not effected by turbulent air flowing past the carburetor when the motorcycle is traveling at high speeds. So the air cleaner cover and the filter element also play an important role in eliminating turbulence and increasing flow.

While installing an S&S Super E or G carburetor on a stock engine will result in more power, the addition of a performance cam and exhaust system will result in even more power gains. Take a look at the S&S Hot Set Up kits on pages 8-10 of this catalog for more information.

SUPER E & G CARBURETOR COMPLETE KITS SELECTION CHART

Application	Year & Type of Engine	Super E Carb Kit Standard	Super G Carb Kit Standard
Sportster	1957-'78 XL‡	11-0404	11-0424
	1979-'85 XL	11-0406	11-0426
	1986-'90 XL	11-0408	11-0428
	1991-up XL	11-0409	11-0429
Buell	1994-up	11-0448	11-0449

‡ Does not fit engines equipped with vertical magneto.

The Super E & G "Shorty" carburetors are designed for American V-Twin applications and are protected by US Patent #5,128,071 which covers thirteen specific design elements.

S&S Super B Carburetors

Since its introduction in 1975 the 1⅞" S&S Super B carb has been a favorite of Harley high-performance enthusiasts the world over. It has under gone a few changes over the years, but it is still true to the original idea. A simple, no frills, high-performance carb that works well on the street and the drag strip.

Applications:

- The S&S Super B gas carburetor has a 1⅞" throat and is recommended for use on any displacement H-D Big Twin or Sportster engine with any degree of performance modifications. This includes stock engines and as well as performance engines.
- Super B carb kits are not available for 1991-later Sportsters, 1992-later Big Twin, or Twin Cam 88 engines.

Notes:

- Two Cable Throttle Required – S&S Super B carburetors require the use of a two cable, pull open-pull closed throttle assembly. Any chassis including 1980 and earlier stock H-D models equipped with a single cable throttle mechanism requires pull open-pull closed type. S&S offers a high quality two cable throttle assembly for this purpose. (See your local S&S Dealer for more informaion.) Stock models from 1981 to present have a two cable throttle which can easily be modified to work with the Super B carburetor.
- Recommended for Racing Only – S&S carburetors are not legal for use in California on motor vehicles operated on public highways or in other states where similar pollution laws may apply. The user shall determine the suitability of the product for his or her use and shall assume all risk and liability in connection therewith.
- Polishing and Chrome Plating the Carburetor – S&S does not recommend polishing and chrome plating any S&S carburetor. Proper preparation to achieve a good finish requires polishing using buffing compounds. The polishing and plating processes and the materials used invariably plug air and/or fuel passageways and feed holes and alter operating tolerances in critical areas regardless of the precautions taken.

S&S Super B complete gas carburetor kits...

include an S&S Super B gas carburetor, an S&S Teardrop air cleaner kit, manifold, mounting hardware, fuel line and clamps, two extra main jets, and installation and jetting instructions.

SUPER B CARBURETOR KITS		
Application	**Year & Type of Engine**	**Carb Kit**
Sportster	1957-'78 XL	11-0104
	1979-'82 XL	11-0105
	1983-'85 XL	11-0120
	1986-'90 XL V²	11-0115
No Manifold	Carb only	11-0111
	Carb kit w/o manifold	11-0100

Note:

Many 1979-'80 engines may be equipped with either o-ring or band style heads. Check before ordering.

S&S Carburetor Replacement Jets

For those who need to rejet their carburetor because of engine modifications, exhaust modifications, or changes in altitude, we have extra jet kits available which are designed to cover most jetting situations. Compare your jets with those in the pictures to determine the proper jet series. The description given tells what carburetors it fits and the sizes available. Also listed are the various groups of sizes offered and their respective part numbers.

Riders & Tuners

It is often difficult to know exactly what jetting combination is best for a particular engine without actually trying it. That is why S&S offers jet packs with a range of jets that gives the tuner the flexibility to try different jetting combinations to achieve the best performance.

For even more jetting options S&S offers high range, low range, and master jet packs for the professional tuner.

Low Range Jet Pack

For jetting most stock and moderate performance engines. – Includes 1 each intermediate jets (.025", .0265", .028", .0295") and 1 each main jets (.062", .064", .066", .068", .070", .072", .074").
.....**11-7270**

High Range Jet Pack

For jetting some stock and all performance engines. – Includes 1 each intermediate jets (.0295", .031", .032", .033") and 1 each main jets (.072", .074", .076", .078", .080", .082", .084").
.....**11-7271**

Intermediate Jets

Series #94 fits all Super 1⅞", 2⅛", 2¼" gas carburetors–sizes available: .025", .0265", .028", .0295", .031", .032", .033", .036", .040".

Sold in packages of 3 jets.

1 each .025", .0265", .028".....**11-7100**
1 each .0265", .028", .0295".....**11-7101**
1 each .028", .0295", .031".....**11-7102**
1 each .0295", .031", .032".....**11-7103**
1 each .031", .032", .033".....**11-7104**
1 each .032",.033", .036".....**11-7105**
1 each .033", .036", .040".....**11-7106**

Master Jet Pack

For jetting all Super B, E, and G equipped engines. – Includes 1 each intermediate jets (.025", .0265", .028", .0295", .031", .032", .033") and 1 each main jets (.062", .064", .066", .068", .070", .072", .074", .076", .078", .080", .082", .084").
.....**11-7272**

Main Jets

Series #72 fits all Super 1⅞", 2⅛", 2¼" gas carburetors – sizes available: .040" to .108" (in increments of .002").

Sold in packages of 3 to 6 jets.

1 each .062", .064", .066", .068", .070", .072"
.....**11-7200**
1 each .066", .068", .070", .072", .074", .076"
.....**11-7201**
1 each .072", .074", .076", .078", .080", .082"
.....**11-7202**
1 each .078", .080", .082", .084", .086", .088"
.....**11-7203**
1 each .090", .092", .094", .096", .098"
.....**11-7204**
1 each .100", .102", .104", .106", .108"
.....**11-7205**

Main Jet Tool

For changing series #72 main jets
.....**53-0452**

The S&S Teardrop Air Cleaner

The S&S Teardrop Air Cleaner is one of the most recognizable shapes in the industry. This is testimony to its distinctive good looks and outstanding performance features – features like the uniquely designed backplate with air horn style radiused entryway and the dimpled cover with air directional cone on the inside. Both features help maximize air flow by giving intake air an efficient, easy path to follow into the carburetor. And the beauty of it all is that the S&S Teardrop air cleaner is also available to fit stock Tillostson, Bendix and Keihin butterfly, CV carbs, or any carb with the same air cleaner mounting bolt pattern.

S&S Air Cleaner Kit for 1991-up carbureted Evolution Sportsters.
17-0117

When ordering...

To ensure that the correct air cleaner kit is shipped to you please specify the type and year of the engine, carburetor to be used, and part numbers of the air cleaner kit and mounting hardware (when applicable).

AIR CLEANER SELECTION CHART

Model Year	Stock CV and EFI	S&S L, H-D Tillostson Bendix, Keihin	Super B	Super E & G	Super D
1991-up Sportster	17-0117			17-0404*	
1988-'90 Sportster			17-0107	17-0399	17-0198
1986-'87 Sportster		17-0108	17-0107	17-0399	17-0198
1966-'85 Sportster		17-0199	17-0099	17-0400	17-0198
1994 & Up Buell	17-0105			17-0402	

*Must be used with ⅜" thick insulator block 16-0497 or 16-0498.

S&S "Patriot" Flag Air Cleaner Cover

There are only a handful of companies that have been around long enough to claim to have helped shape the industry and lifestyle that is so popular around the world today. One, of course makes motorcycles in Milwaukee. Another is S&S Cycle, Inc.

Founded in 1958, S&S has been building high performance engines and engine components for the heavyweight cruiser market without interruption for over forty-five years. Quality, performance, and dependability are the values that S&S is famous for and the legendary S&S teardrop air cleaner cover is a symbol to all that its owner feels the same way we do, second best is not good enough.

To celebrate the rich heritage of S&S and its place in the American motorcycle industry, we are offering for a limited time only this "Patriot" version of the famous teardrop air cleaner cover. An American flag on an American carburetor on an American motorcycle.

Patriot Air Cleaner Cover 17-0385

Desperado Air Cleaner Cover 17-0004

S&S "Desperado" Air Cleaner Cover

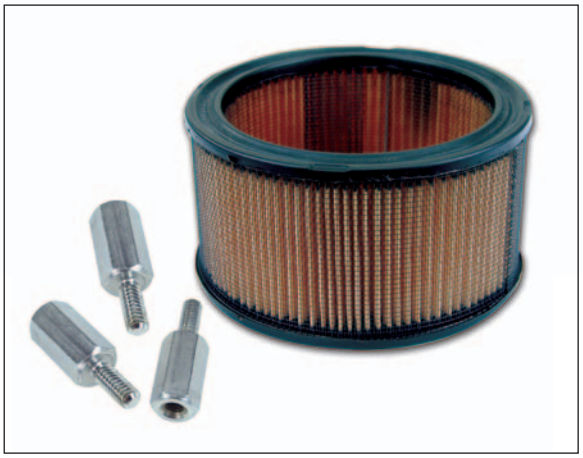
A second design, the "Desperado", is also now available. The Desperado had its beginnings in much more down-to-earth circumstances. While developing the new Super Sidewinder™ Plus series of engines we found that their increased performance called for a better breathing intake tract and of course the air cleaner cover is the first part in that tract. During dyno testing, a 1-2 horsepower gain was realized and, as with the Patriot air cleaner cover, it does not require any jetting changes to a properly jetted carburetor. Good looks and better performance.

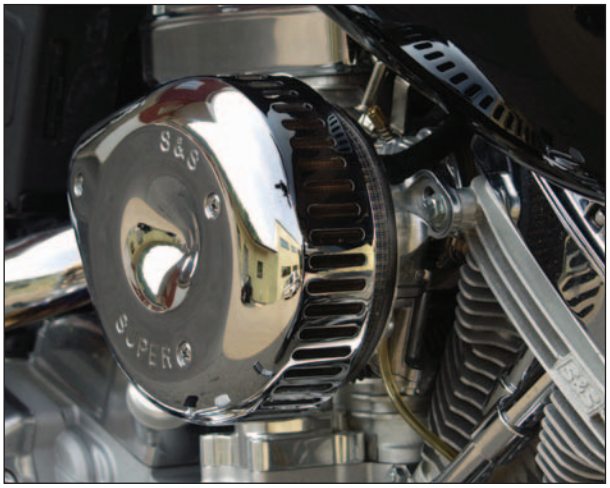
Patriot and Desperado air cleaner covers are available for S&S Super E & Super G "Shorty" carburetors only.

S&S High Flow Air Filter and Adapter Kit

With larger and larger street engines becoming more common, S&S has developed a high flow air filter kit for Super E and G carburetors. The new S&S high flow filter is 1" taller than our standard filter and features a low restriction, pre-oiled filter element. The low restriction element, combined with the larger surface area provided by the 1" filter taller, adds up to an airflow increase of 37% percent over our standard filter - the ultimate free breathing set-up for your engine! The filter and filter adapters extend the teardrop housing out 1". The resulting band of exposed filter peeking out from under the teardrop imparts a high performance street racer look. Kit installs in minutes, no permanent modifications required.

* Not for use with S&S Super B or Super D carburetors, or Super E & G Kits for Buells.





High-flow filter with high performance looks

Extended filter kit provides maximum airflow for air hungry engines. This free breathing set-up looks like it just came from the track. Easy to install, kit is one inch taller than our standard teardrop filter, and features premium filter media. Includes filter and three plated steel air cleaner extensions.

High Flow Filter Kit Contains:

(1) High flow filter for S&S Super E or G Teardrop air cleaner. (One inch taller than the standard S&S filter.)

(3) 1" Tall plated steel filter adapters.

Air Filter & Adapter Kit

For S&S Super E and G Carburetors
.....**17-0045**

Replacement Filter
.....**17-0055**

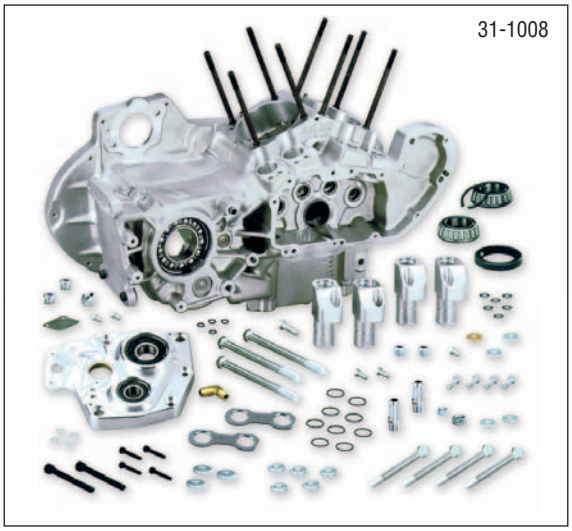
S&S EVOLUTION SPORTSTER AND BUELL STYLE CRANKCASES

We've made some changes to our Sportster and Buell style crankcases. By making a couple of small machining changes we've made one crankcase that fits both 1986-'03 Sportsters and 1994-'03 Buell chassis. It should be noted that although these cases will fit the 1986-'90 four speed style Evolution Sportster chassis, they require a 1991-'03 style five speed transmission, clutch, alternator, and flywheel assembly. For this reason they are not stock replacement crankcases for 1986-'90 four speed engines.

Although S&S can supply crankcases with 1986-'90 (four speed) or 1991-'03 (five speed) cam chest geometry, S&S recommends using the 1986-'90 cam chest, tappets, and cover. This style of tappet, which is the same one used in Evolution Big Twin engines, has a larger roller and, has proven to be more reliable in high performance applications. In addition, four speed style cam covers are more readily available to complete scratch built engines.

Crankcases machined for five speed cam geometry require 1991-2003 style cams and 1991-'96 gearcover. Unlike stock five speed crankcases, S&S cases with 1991-'03 style cam chests feature special removable billet aluminum tappet guides which allow the use of 1986-'90 style pushrod covers. These tappet guides, provide a replaceable wear area for tappet travel, and two piece pushrod covers allow access to adjustable pushrods normally used in high performance applications. Pushrods can not be accessed with the stock five speed style one piece pushrod tubes.

All S&S Sportster/Buell style crankcases can be used with any stock 1986-up Sportster oil pump and require a 1986-'90 style oil filter assembly. In addition to the complete compliment of hardware and fittings that are provided with all S&S crankcases, Sportster/Buell style cases also include an S&S heavy duty transmission access door. The S&S transmission door provides a seal between the primary case and the transmission, allowing the use of different lubricants in each section. A simple modification allows the primary case and transmission to share the same oil. The transmission door is complete with required bearings and bushings installed. Right side transmission case bearings are also installed and ready for assembly.



S&S Sportster/Buell style crankcases for 5-speed (1991-2003) cam geometry include billet tappet guides designed to accept 5-speed tappets. Case with four-speed cam geometry do not include tappet guides since stock can be used.

S&S SUPER STOCK™ SPORTSTER/BUELL STYLE CASES...

are available for stock bore and 3⅝" bore engines. For bore sizes larger than 3⅝" and for deck heights taller than stock, S&S Special Application (SA) Sportster/Buell style crankcases are available. By special order, S&S SA crankcases can be machined for Deck heights as much as 1" taller than stock, and for cylinders with spigots up to 4.635" in diameter.

See your S&S Dealer for more information on S&S Special Application Sportster/Buell style crankcases.

S&S SUPER STOCK™ SPORTSTER/BUELL STYLE CRANKCASE SELECTION CHART

Cam Geometry	Stock Bore	3⅝" Bore
1991-2003	31-1008*	31-1009*
1986-1990	31-1013	31-1014

NOTES: All S&S XL crankcases use 5-speed transmission and primary components. These cases will not accept 4-speed transmissions or flywheel assemblies.

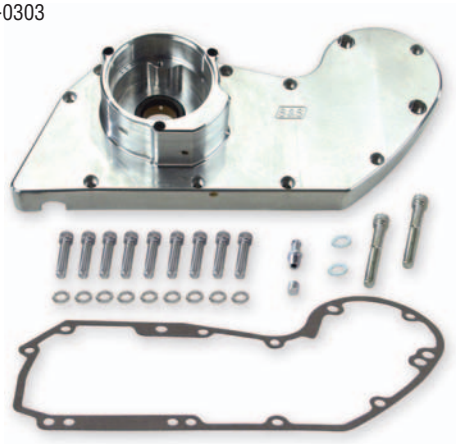
* Requires use of S&S cam cover gasket. (S&S 31-2052) 1991 & later cases require 1991-'97 gear covers. Includes lifter blocks.

S&S Sportster Billet Gearcovers

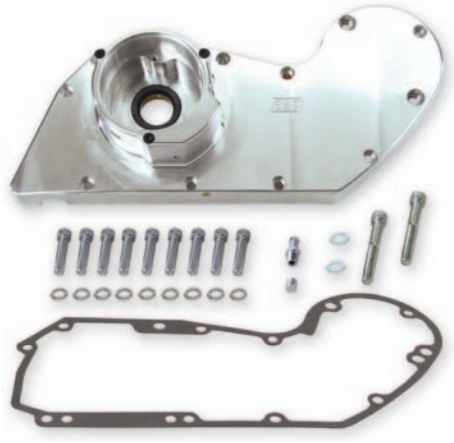
Bushing Syle

S&S billet Sportster gearcovers are intended for S&S Sportster style crankcases only. These gearcovers are not recommended for engines with stock 1986-'90 crankcases as they have no provision for the four-speed style crankcase breather. Kits come with hardware and special S&S gearcover gasket.

31-0303



31-0302



S&S Billet Gearcovers

Bushing Style

1986-'90 ..... **31-0303**
1991-'99 ..... **31-0302**

Replacement Gasket (5 Pack) **31-2099**
Replacement Seal (5 Pack) **31-4114**

Tappet Guides and O-Rings for V² Sportster Style Engines

S&S Evolution Sportster style tappet guides are machined from billet aluminum. Assemblies and kits designated as "stock style" fit stock style Sportster style crankcases including S&S Super Stock™ cases. Assemblies and kits designated as "SA" are designed for S&S Special Application crankcases with ½" cam chest offset. Special S&S 1991-up tappet guides are designed exclusively for S&S Super Stock™ and Special Application Sportster style crankcases with 1991-up cams. These cases are machined for removable tappet guides similar to 1986-'90 engines. However, these special tappet guides are designed to be used with the 1991-'99 stock style Sportster tappets.

Sportster tappet guide assembly set. 33-5375

S&S 1986 -'90 V² Sportster Tappet Guide Selection Chart

	1986-'90 Stock Style	1986-'90 S&S Special Application
Set	33-5375	33-5365
Front Intake	33-5372	33-5362
Front Exhaust	33-5371	33-5361
Rear Intake	33-5374	33-5364
Rear Exhaust	33-5373	33-5363

Special S&S 1991-up V² Sportster-Style Tappet Guide Selection Chart

	1991-Up S&S Super Stock Guides	1991-Up S&S Special Application Guides
Set	33-5389	33-5369
Front Exhaust/Intake	33-5385	33-5381
Rear Exhuast/Intake	33-5387	33-5383

Tappet Guide O-Ring Kit

1986-'90 Sportster and 1991-up S&S Sportster Style

.....**50-8153**

Upper O-ring - 1" ID x 13⁄16" OD x 3⁄32" CS Viton
(HD#11167A) (10 Pack) **50-8079**

Lower O-ring - 1" ID x 1⅛" OD x 1⁄16" CS Viton
(HD#11168A) (10 Pack) **50-8087**

Oil Passage O-ring - ⅜" ID x ½" OD x 1⁄16" CS 70 Buna
(HD#11110) (10 Pack).....**50-8077**

S&S Hydraulic Tappets for Evolution Sportster Style Enignes

S&S Hydraulic Tappets fit all Big Twin V² style engines and 1986-'90 Sportster engines. These tappets feature numerous significant design improvements.

- Larger inner bearing race reduces stresses to increase axle, bearing, and roller life. The S&S inner bearing race is .123" larger in diameter than the "raceless" roller axles currently used by some manufacturers.
- Improved inner race-roller design allows use of more, and larger bearings to increase load-carrying surface area, further reducing stress and wear in the critical roller areach
- Redesigned plunger assembly better withstands forces associated with heavy-duty valve springs and cams typically used in high-performance applications.
- Revised metering device precisely controls oil delivery to top end, insuring rapid lifter pump-up and reducing possibility of oil starvation to bottom end.
- Each lifter body and plunger assembly is hand-fit and then pressure-tested to insure correct operation.

S&S Hydraulic Tappet Assembly

Without HL_2T Kit (Set of four) **33-5352**

With HL_2T Kit (Set of four) **33-5353**

NOTE:

Because of close tolerances, tappet in set 33-5353 may require slightly longer bleed-down time than conventional tappets. At temperatures of 65°F and above, however, bleed-down should take 20 minutes or less using 20W50 engine oil.

Robin..

This 2004 Sportster owned by Robin Smith, wife of S&S company President Brett Smith, is equipped with the new S&S Air Cleaner and Muffler Hot Set Up kit.

CAMS FOR V² SPORTSTERS

1986-Up Evolution Sportster Style

S&S 500 Camshaft for 1986-up Evolution Sportsters.
33-5081

S&S 500 Cam

For modified 1200s & up to 89 Sportsters with no more than 9.5:1 compression -

"Bolts-in" and works with stock or ported heads - valve spring spacing not required - other normal clearancing checks recommended. See "Camshaft Specification Chart" for overall cam timing information.

S&S 555 Cam

For 79" and larger Sportsters with compression ratios from 9.5 to 11.5:1 -

Works better with ported heads - broad torque range from 3500 to 6500 rpm - valve spring spacing and other normal clearancing checks must be done. See "Camshaft Specification Chart" for overall cam timing information.

NOTE:

2000-up Sportsters and Buells with stock flywheel assemblies require a 1991-'99 style pinion gear if S&S cams are to be installed. Engines with S&S flywheels require 1986-'87 style pinion gear available from Harley-Davidson or S&S.

1986-UP EVOLUTION SPORTSTER CAM SPECIFICATION CHART

Name	Application	Model Year	Camshaft Part Number	Valve Timing[1] Open/Close		Valve Duration		Valve Lift	Lift @ TDC[2]		Spring Spacing Required	Tappet[3] Type Required
				Intake	Exhaust	Intake	Exhaust		Intake	Exhaust		
S&S 500	74" to 89" with 9:1 to 10.5:1 CR. 89" to 100" with less than 9.5:1 CR. Good torque, easy installation.	1986-'90	**33-5081**	34°/50°	56°/28°	264°	264°	.500"	.241"	.212"	Yes	Solid or Hydraulic
		1991-Up	**33-5082**									
S&S 555	74" to 100" with 9.5 to 11:1 CR. Better mid range and top end.	1986-'90	**33-5083**	33°/53°	53°/33°	266°	266°	.555"	.240"	.240"	Yes	Solid or Hydraulic
		1991-Up	**33-5084**									

1 Timing designation is function of zero lash @ .053" off base circle
2 TDC lifts are measured at the valve and are for reference only. Overlap valve lifts must be checked on assembled motor. Minimum valve to valve clearance of .040" is recommended.
3 Cams specified for solid tappets may be used with modern high performance hydraulic tappets with V² style hydraulic mechanism. Stock hydraulic tappets are not recommended.
4 1980-81 engines require conversion to late style valve guides.

High-Performance Valve Spring Kits

S&S valve spring kits are designed to simplify high-lift cam installation and reduce the risk of valve float. They eliminate most of the complicated procedures and specialized tools required to prepare cylinder heads for high lift cams. While confirming critical clearances remains the responsibility of the engine builder, most Evo street cams will require no additional modification of the cylinder head when S&S valve spring kits are used. In some instances, S&S valve spring kits serve as excellent replacements in stock rebuild applications. All kits include detailed instructions.

Valve Spring Kits for 1986-up Sportsters

.640" Lift Triple Valve Spring Kit –
Fits S&S Super Stock™, H-D, and other V² or Twin Cam-type heads that require stock O.D. outer spring. Includes 4 top collars, 4 bottom collars, 4 each outer, middle, and inner springs, 8 shims (4 each .015", 4 each .030"), and 8 keepers.

Use with shoulderless-style valve guides. Special keepers included fit valves with stock 5/16" stems and S&S collars only. Patented steel top collars are drilled for lightness and to increase cooling of valve springs. Spring seat pressure is 170 lbs. at stock 1.800" installed height. Open pressure is 390 lbs. at .560" lift, 415 lbs. at .630" lift.

.640" Lift Triple Valve Spring Kit for V² Sportsters

Kit w/steel top collars.....**90-2077**

Kit w/titanium top collars **90-2078**

NOTES :

- High-lift cams may require the engine builder to obtain additional clearance between the piston and valves, the intake and exhaust valves and the upper spring collar and rocker cover. Clearance should also be checked between the rocker arm and valve spring collar as well as between the rocker arm and rocker cover. It is imperative that the engine builder confirm these clearances and check for spring coil bind, even when using parts specifically designed for high-performance. Most valve train failures can be traced to over-revving or failure to confirm correct clearances during assembly.
- When ordering valve springs, please specify engine year.

S&S QUICKEE PUSHRODS FOR EVOLUTION SPORTSTER STYLE ENGINES

S&S developed a pushrod with a new type of adjuster for use with S&S Shovelhead style tappet guides. This is such a cool idea that we've also made it available for Evolution and Twin Cam engines. The threaded adjuster screws into the pushrod until the threads disengage and the adjuster simply slides into the pushrod making installation or removal a snap. Once the pushrod is installed and adjusted, the locknut prevents the adjuster from moving. The ball ends of the pushrods are drilled so that oil can flow through the pushrod. This is the stock oiling system for Evo's and Twin Cams, but this allows Shovelhead engines to be set up with 1984 and later style top end oiling, via the pushrods, provided S&S Shovel style tappet guides and roller rocker arms are also used.

S&S Exclusive
Quickee Pushrods
US Patent Pending

NOTE:
S&S Quickee pushrods are designed for use with Evolution and Twin Cam style hydraulic tappets. They are not compatible with stock or aftermarket Shovelhead hydraulic tappets or most solid style tappets.

S&S EASY INSTALL PUSHRODS

Application	Displacement	Part Number
1991-up V² XL	883cc – 89"	**93-5131**
1991-up V² XL	103"	**93-5133**
1986-90 V² XL	883cc – 89"	**93-5130**
1986-90 V² XL	103"	**93-5132**
Special Order	Specify	**93-5135**

EVOLUTION PUSHROD COVER ADAPTER FITS 1991-'03 SPORTSTER

S&S Evolution Sportster pushrod cover adapters are designed to convert 1991-'03 Sportster crankcases to accept 1986-'90 style pushrod cover assemblies to allow access to adjustable pushrods. Four are required for each engine.

Adapter (Set of four).....**33-5355**

S&S Pushrod Kits

Pushrod flex costs horsepower by preventing the valves from following the cam profile. This problem is most common in high-performance applications with heavier-than-stock valve springs.

S&S pushrods are designed to remain rigid and provide positive valve action at all engine speeds, which makes them ideal for stock and high-performance applications. They are available in stock and special lengths. Most S&S pushrods are made of 7/16" O.D. chrome moly steel tubing with pressed-in heat-treated ends. This provides maximum strength and durability regardless of the application.

All pushrods are listed by length in terms of their relationship to stock. Pushrod length varies directly with effective cylinder lenght.

Adjustable Pushrod Conversion Kits –
Include four adjustable V2 style steel pushrods. These pushrods can be used in place of the stock, non-adjustable pushrods in stock as well as high-performance applications. Compatible with hydraulic and solid lifters.

1986-'90 V² Sportsters Pushrod Selection Chart		
Displacement	**Part No.**	**Cylinder Length**
883cc, 1200cc, 79"	93-5033	4.650" (Stock)
89"	93-5022	5.087" (+.437")
103"	93-5025	5.750" (+1.100")
Special Order	93-5036	Specify

1991 & '03 V² Sportsters Pushrod Selection Chart		
Displacement	**Part No.**	**Cylinder Length**
883cc, 1200cc, 79"	93-5022	4.650" (Stock)
89"	93-5089	5.087" (+.437")
103"	93-5088	5.750" (+1.100")
Special Order	93-5036	Specify

93-5030

S&S Pushrod Kits for Ironhead Sportsters

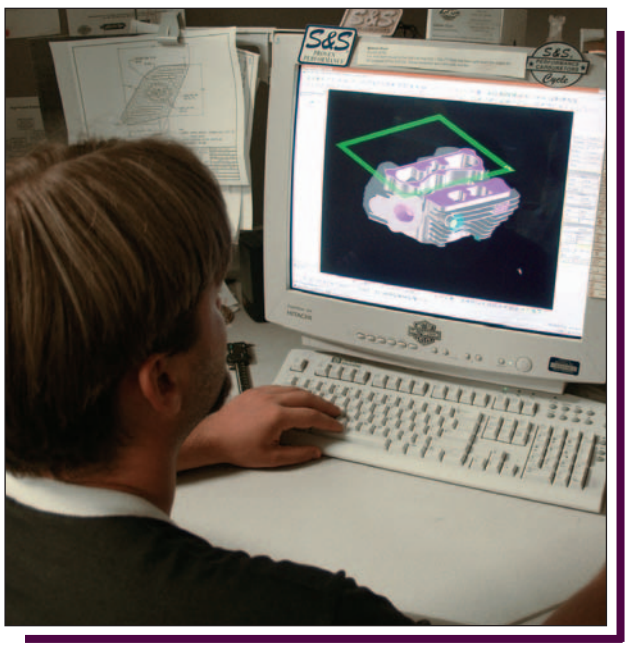
1957–'85 Ironhead Sportsters 900cc and 1000cc - 7/16" Steel

1957-'85 Sportster – Includes four non-adjustable pushrods. S&S pushrods are a direct replacement for stock. (HD#17904-57)

1957-'85 Ironhead Sportsters Pushrod Selection Chart	
Part No.	**Cylinder Length**
93-5037	5.330" (Stock)
93-5038	Special Order

S&S Super Stock™ Cylinder Heads

Over the last ten years, S&S Cycle has become the leading aftermarket manufacturer of high performance cylinder heads for Harley-Davidson® and other American V-Twin motorcycles. Old timers will remember that when the S&S Evolution style heads became available, they were the final piece that allowed S&S to offer a relatively complete engine assembly. Time marches on, and today we see S&S engines powering the majority of the custom V-Twins being built today. That's because of reliability and power. S&S quality make our engines reliable, but it's our cylinder heads that make the power. It's pretty fundamental, more air in, more power out!



Performance By Design

S&S cylinder heads are the result of years of design and research work. Using the latest in computer aided design techniques, all S&S parts, are designed and "built" first as 3-D models on the computer. Using our laser rapid prototyping capability, dimensionally correct parts can be produced in plastic from the 3-D model. This allows S&S engineers to solve the majority of dimensional problems before we are committed to tooling and hard parts. By using these cutting edge design methods, we fast-forward the development of our cylinder heads and are way ahead of the game when it comes time for real world testing. We already know how a cylinder head will flow and what the chamber volume will be before we make the real parts in metal.

Proven Performance – S&S Testing

The S&S company motto is "Proven Performance", and it is not just something we say. It's what we do. S&S cylinder heads have been subjected to a comprehensive testing program to insure that the performance will be there every time you twist the throttle. We've proved it! Flow testing, dyno testing, many thousands of simulated miles on our engine durability stand, and of course many more thousands of miles of real world road miles and countless passes at the race track have proven that S&S cylinder heads do perform.

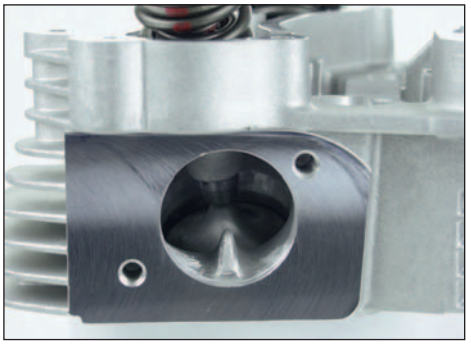
Applications

S&S cylinder heads for Shovels, Evolution Big Twins, Evolution Sportsters, and Twin Cams are recognized as the "best" in terms of performance and value. They are designed to be easy to install, and to be compatible with stock components whenever possible. Stock-like outer dimensions eliminate most clearance issues often associated with high performance cylinder heads. However, all S&S heads for Evolution and Twin Cam style engines have larger than stock intake ports for increased air flow. This requires that a special S&S intake manifold be used that matches the diameter of the S&S intake port. Depending on the type, S&S cylinder heads are available in natural aluminum, black wrinkle powdercoat and polished finish.

S&S also has specialized cylinder heads for all-out racing engines which can be found starting on Page 11-46 in the Racing section of this catalog.

State Of The Art Manufacturing

S&S cylinder heads are machined from heat treated aluminum castings, using "state of the art" NC machining centers for the best possible dimensional precision at the lowest possible cost. This high degree of capability assures that the quality our customers demand and have come to expect from S&S is consistent in every part we make. The efficiency that we gain from automated machining helps to lower our costs, and that means that our customers can purchase S&S quality components at competitive prices.



Evolution Style Cylinder Heads For Sporsters

The first cylinder heads S&S introduced in 1994 were for Evolution 3½" and 3⅝" bore Big Twins and Sportsters. Then in 1998, S&S introduced the heads for 4" bore Big Twin and Sportster style engines. Both of these types of cylinder heads are available on complete S&S engines and individually for replacement and custom applications.

Features:

- 2.000" intake valves and 1.605" exhaust valves.
- Special "cast to shape" intake ports with a special directional fin for improved air flow.
- Precision CNC machined from heat treated aircraft quality aluminum castings.
- Complete assembled heads contain premium valves and S&S .640" lift valve springs.
- Available as "bare" sets, fully machined, but without valves or springs.
- Available in natural aluminum, black powdercoat, and polished (specific models only) finish.

Super Stock™ cylinder head kit shown in optional black finish. Specify finish when ordering. 90-1802

S&S Cylinder Heads For 3½" & 3⅝" Bore Engines

S&S heads for stock and 3⅝" bore engines were originally designed for engines using stock crankcases and in some cases, stock cylinders. Although these heads are machined with the stock Evolution cylinder stud pattern, and may be used on stock crankcases, special pistons are required with a "pop up" dome shape that matches the contour of the S&S combustion chamber.

S&S Exclusive
Compression Release
US Patent 6,557,510

Why Special Pistons?

Even though special pistons add to the expense and effort required to install these heads, there are several good reasons why we designed these cylinder heads to use special pistons. A larger, more open combustion chamber presents less resistance to air flow around the valves. However, in smaller displacement engines like 1200cc Sportsters, 80" Big Twins, or even a 96" S&S engine, a larger chamber will produce a very low compression ratio with a stock style flat topped piston. We wanted the improved flow of a larger chamber, but we also wanted compression ratios slightly higher than stock. The solution, of course, was to use a larger chamber, for the flow, with a domed piston, to increase compression. We then went a step further and designed a specially shaped combustion chamber and a piston dome, shaped to match the contours of the chamber. Due to the increased "squish" area of this design, the interaction between the cylinder head and piston dome at TDC, sets up a controlled turbulence in the combustions chamber. That turbulence improves flame travel for a more efficient burn and reduced detonation. Pistons are available to achieve various compression ratios.

Ordering Notes

Your S&S dealer can help you put the correct package together for your engine. Following these simple steps will make it easy, and ensure that you have everything you need.

1. Select the cylinder head kit that is correct for your application. (See chart below.)
2. Select a cylinder head gasket installation kit for the bore size of your engine.
3. Select a manifold for the cylinder length of your engine and carburetor you intend to use. See your S&S dealer for more information.
4. Select a set of pistons for your bore size, engine displacement, and desired compression ratio. Your S&S dealer can help you select the correct piston for your application.

Step 1

Cylinder Head Kits

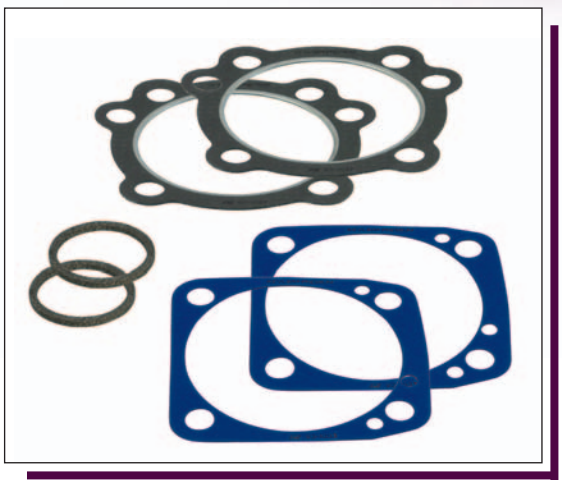
Select a cylinder head kit for your engine style.

Assembled Heads for 3½" and 3⅝" Bore Evolution Style Engines						
	Natural			Black		
Bolt Pattern/Bore	Set	Front	Rear	Set	Front	Rear
V² XL 1986-'90	90-1302	90-1302F	90-1302R	90-1802	90-1802F	90-1802R
V² XL 1991-'03	90-1310	90-1310F	90-1310R	90-1810	90-1810F	90-1810R
Buell 1994-'02	90-1305	90-1305F	90-1305R	90-1805	90-1805F	90-1805R

Step 2

Gasket Kits For S&S Evolution Style Cylinder Heads

S&S has convenient cylinder head installation gasket kits that contain high quality S&S head and base gaskets as well as gaskets for the exhaust pipes. Whether your engine is stock 3½" bore or if it has a 3⅝" big bore kit the correct gaskets are available. See your S&S dealer for full details.



Gasket Kits For S&S V² Sportster Style Cylinder Heads

Engine and Bore Size	Part Number
3½" Bore V² Sportster/Buell	90-1907
3⅝" Bore V² Sportster/Buell	90-1908

Step 3

Manifolds for S&S V² Sportster Style Cylinder Heads

Select the correct S&S manifold for your engine. Your S&S dealer can help you select a manifold that is the correct length for your engine and the correct size for the carburetor you intend to use. S&S offers manifolds for S&S Super E, Super G and Super D carburetors, as well as the more popular CV carbs.

Step 4

Pistons for S&S 3½" & 3⅝" Bore S&S V² Sportster Style Cylinder Heads

Select the correct piston for our application. Your S&S dealer can help you select the correct piston for your engine, whether it is a stock 883 or 1200 or if the displacement has been increased with a 3⅝" big bore kit.

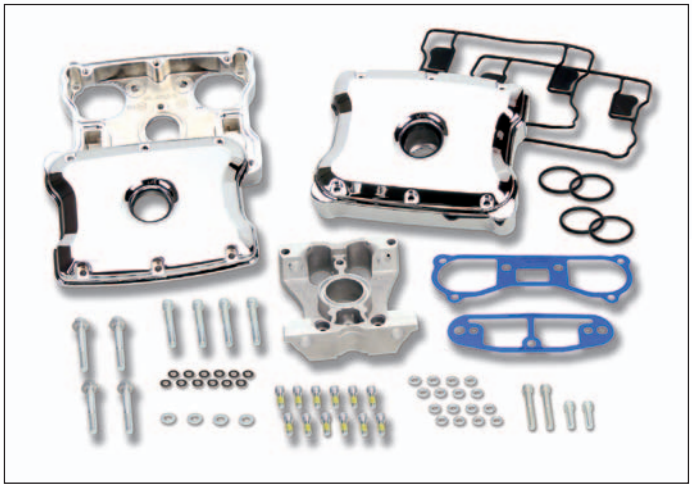
Note:
S&S Super Stock™ Evolution style cylinder heads must be used with S&S Super Stock™ pistons. Use with stock flat topped pistons will result in very low compression and poor performance.

S&S Rocker Covers

for 1986-'03 V² Style Sportsters and 1994-'02 Buells

S&S manufactures two types of rocker covers for V² style engines, billet and die-cast. Billet covers are manufactured from aluminum billet using computer – controlled machining centers. Cast covers are also made of aluminum but using the more economical die casting process. All S&S rocker covers include formed Viton® gaskets and o-rings for leak-free operation; our proven two-piece design makes for a simple installation.

Which is better – billet or die-cast? Both work equally well for most applications. The billet covers will allow the use of larger diameter valve springs and valves with extra long stems without additional clearancing. However, in the vast majority of street applications using S&S Super Stock™ or H-D cylinder heads, either style rocker covers can be used according to the builder's preference and budget.



S&S die cast rocker covers offer an attractive alternative to billet covers at a much lower price.

NOTE:
In spite of the similarities between different S&S rocker covers, not all parts are interchangeable. See Replacement Rocker Cover Parts for correct part numbers.

Special Design Features:

- S&S rocker covers fit all engines that accept stock H-D V² Sportster rocker covers - regardless of year and whether the engine vents through the crankcase or cylinder heads. OEM-style "umbrella" fittings are included with billet rocker boxes for 1991 and up Sportsters engines with cylinder head venting. Cast rocker boxes use an exclusive one way valve which is built into the rocker cover gasket to control oil carry over in "head breathing" engines.
- S&S cast rocker covers and billet rocker covers for V² style engines include all parts required for installation.
- S&S rocker covers are available in three finishes: show-quality chrome, polished, or raw machined. Raw machined is ideal for powdercoating and other custom appearance treatments.
- Installation on stock and most comparably sized engines can be performed without removing the engine from the frame. Extremely tall engines such as the 4¾" stroke, 98" and 5" stroke, 103" may require removal from the frame for rocker cover installation.

NOTE:
Minor clearancing of the front motor mount is required to install S&S rocker covers on Buell motorcycles.

Continued...

S&S Rocker Covers for 1986-'03 V² Style Sportsters, and Buells

S&S V² Rocker Covers and Related Parts

Billet Rocker Covers for 1986-'03 V² Sportsters and 1994-'02 Buells

Chrome **90-4050**
Polished **90-4080**
Raw, Machined **90-4055**
Gasket Kit **90-4049**

Die-Cast Rocker Covers for 1986-'03 V² Sportsters and 1994-'02 Buells

Chrome **90-4095**
Polished **90-4090**
Raw, Cast **90-4083**
Gasket Kit **90-4091**

S&S billet rocker covers are the ulitmate in quality. Strength and beauty are combined in our finest Evolution style rocker covers.

NOTE:

In most instances, only minor clearancing is required to use S&S rocker covers with valve springs larger than 1.660" O.D. Kits include front and rear cover assemblies with base and top cover, rocker shaft supports, gaskets and o-rings, and instructions.

NOTE:

The performance-oriented design of the billet rocker boxes permits valve lifts up to .710" with stock H-D or S&S Super Stock™ heads, and up to .810" with S&S Special Application heads using stock H-D or S&S roller rocker arms. Cast rocker boxes may require some minor clearancing, and it is recommended that they be ordered either polished or raw machined, so that clearancing may be done without disturbing chrome plated surfaces.

S&S billet rocker covers accept valve springs up to 1.660" O.D. without modification. Cast rocker boxes may require minor clearancing. Cylinder heads must be set up correctly for high-lift cams, and it remains the builder's responsibility to confirm all clearances.

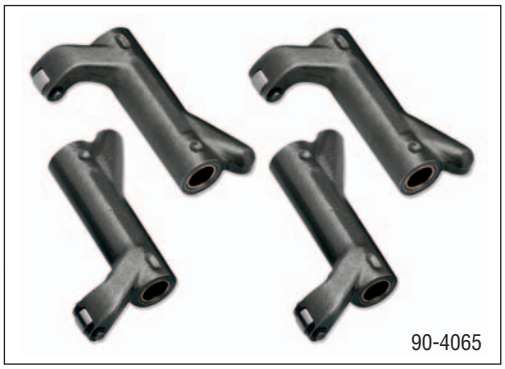
S&S Rocker Wrench Set

The S&S rocker wrench set 53-0040 speeds installation and is recommended for professional use. Installation can also be accomplished with shortened allen wrenches.

S&S Forged Rocker Arms and Rocker Shafts for 1986-'03 V² Sportsters

Our forged steel roller rocker arms were designed for superior strength and to eliminate the failure-prone stress areas found in some other rockers. S&S roller rockers are forged from 4140 steel, heat-treated, and then shot-peened for additional strength and protection from fatigue. Our rockers also utilize ¾" long bronze bushings, compared to the more common ½" long bushings or needle bearings, and feature a modified lubrication system with unrestricted roller oiling.

The end result is what we believe to be the finest rocker arm available anywhere, for any price.



Roller Rocker Arm Set

Includes: 2 each front and rear rocker arms. **90-4065**

Individual:

Front exhaust or rear intake.....**90-4065F**

Rear exhaust or front intake **90-4065R**

Rebuild Kits for S&S Rocker Arms

Current S&S forged rocker arms.....**90-4104**

Bushings

Current S&S forged rocker arms, .750" long.....**90-4014**

Rocker Arm Shafts

Each (HD#17611-83) **90-4006**

Set - Includes 4 each 90-4006 .....**90-4036**

New! S&S Chrome Head Bolt Covers!

NEW product

Dress up your engine with these magnetic chrome head bolt covers. Easy installation, no tools, no messy adhesives. A powerful magnet holds cover in place, yet allows easy removal. Chrome plated steel looks great on any engine, but is a must for polished engines. For S&S head bolts only.

Sold in a set of 4.

S&S Exclusive Head Bolt Covers US Patent Pending

Chrome Head Bolt Cover set

.....**50-0333**

Introducing... S&S Standard Forged Rocker Arms!

If are looking for something better than stock Evolution or Twin Cam style rocker arms, but you're application does not warrant the expense of roller rockers, this is it! S&S now offers an economical solution for stock rebuilds, and mild performance upgrades. S&S standard rocker arms are forged from 4140 steel for greater strength than stock or cast steel rocker arms. In addition they feature the same .750" long rocker shaft bushings as our S&S roller rockers do. The longer bushing provides 50% more load bearing area than the .500" long bushings used in stock and other aftermarket rocker arms. The valve contact tips are induction hardened for extended durability. Thousands of hours of engine testing have proved them to be superior to any non-roller rocker arm on the market. Fits Evolution Sportster style engines. Recommended for cams of .585" lift or less.

90-4119

S&S Standard Rocker Arms for V² Sportster Style Engines

Set - Includes 2 each front and rear rocker arms **90-4119**

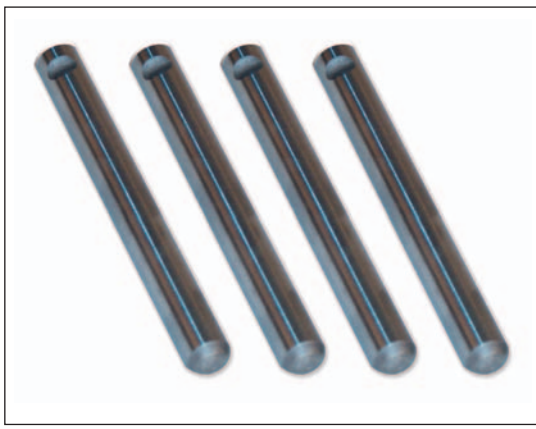
Individual:

Front exhaust or rear intake **90-4119F**

Rear exhaust or front intake **90-4119R**

NOTES:

- ¾" long bushings provide 50% more bushing support area than ½" long bushings. They eliminate the risk of engine damage associated with failed needle bearings.
- Adjustable pushrods must be used with S&S roller rocker arms to obtain proper valve clearance.
- New rocker arm shafts are recommended for maximum performance and rocker life.



Rocker Arm Shafts

S&S rocker arm shafts can be used for stock replacement as well as with S&S roller rockers or standard rocker arms.

Each (HD#17611-83) **90-4006**

Set - Includes 4 each 90-4006 .....**90-4036**

S&S Speedometer Calibrator

The electronic speedometer calibrator corrects the reading of stock H-D electronic speedometers when using oversized rear tires, or when other drive train modifications have been done that effect final drive ratio.

The accuracy of electronic speedometers provided on late Harley-Davidsons can be greatly affected by the installation oversized tires, non-stock wheel or transmission sprockets, and by the replacement of certain transmission gears. These modifications are often made for appearance, to improve acceleration, decrease engine RPM at highway speeds, or to reduce mechanical noise.

S&S Electronic Speedometer Calibrator

.....**55-1007**

Notes:

- Calculating the difference between actual and indicated speeds/mileage requires only that the rider compare odometer readings to a known distance. Highway mile markers are usually accurate enough to use for calibration, although the test should be repeated between several different markers for confirmation. The S&S Speedometer Calibrator can then be adjusted to increase or decrease the speed and mileage indicated by the speedometer. In most cases it is possible to achieve accuracy within .5%.
- The S&S speedometer calibrator will not work with Rev Tech transmissions.

The S&S Speedometer Calibrator...

allows the rider to correct H-D electronic speedometers easily and without special tools or expensive test equipment. Installation is simply a matter of unplugging the connection between the transmission sensor and speedometer and plugging the two connectors into the S&S Calibrator. The Calibrator can then be used to correct the difference between actual and indicated speeds and mileage.

Features:

- Fits all Harley-Davidson Big Twins and Sportsters equipped with O.E.M. electronic speedometer.
- Allows precise adjustments in 1% increments between -29% and +69%.
- Compact size (2.25" x 1.50" x 1.10") permits a neat, simple installation.
- Sensitive components are sealed in epoxy for protection from vibration and weather.

Limited Warranty Standard Parts

Who Is Covered By This Warranty?

This warranty covers only the original Consumer Purchaser of these parts and is not transferable.

What Does This Warranty Cover?

S&S Cycle, Incorporated (the "Company") warrants these parts to be free from defects in material and workmanship. If the parts become defective during the warranty coverage period, the Company will, at its option, repair or replace any, or all, defective parts. Repair or replacement of defective parts is the sole and exclusive remedy.

How Long Is The Warranty Coverage?

The warranty coverage remains in force for a period of twelve (12) months from the date that the original Consumer Purchaser buys the parts. However, warranty coverage will automatically terminate if the original Purchaser sells or otherwise transfers all or any portion of the purchased parts.

What Is Not Covered By This Warranty?

The Company shall not pay or be responsible for the cost of shipping the defective parts to the Company for service under this warranty, nor will the Company pay for the cost of labor to remove and/or replace the defective parts.

Moreover, the Company shall have no obligation under this warranty in the event that the parts become defective in whole or in part as a result of improper assembly, installation, break-in, maintenance, or use, or any other misuse or mistreatment of the parts, including, without limitation, operation of the parts with fuels, oils or lubricants not conforming to specifications published by the Company or continued operation of the parts after a defect or malfunction occurs or is identified or suspected.

The Company shall have no obligation under this warranty for defects in parts with a powdercoat finish, when that option is selected, if the defects are caused by, but not limited to, negligence of parties other than the Company; an accident; ordinary wear and tear; assembly or disassembly; power washing; natural occurrences like stone chips; bead blasting; improper maintenance including the use of any harsh cleaning agent, chemical or solvent; and salt or other substances used on streets and highways for maintenance and safety.

The Company provides touch-up paint with powdercoated parts. It is the customer's responsibility to repair minor finish damage to prevent or inhibit further deterioration.

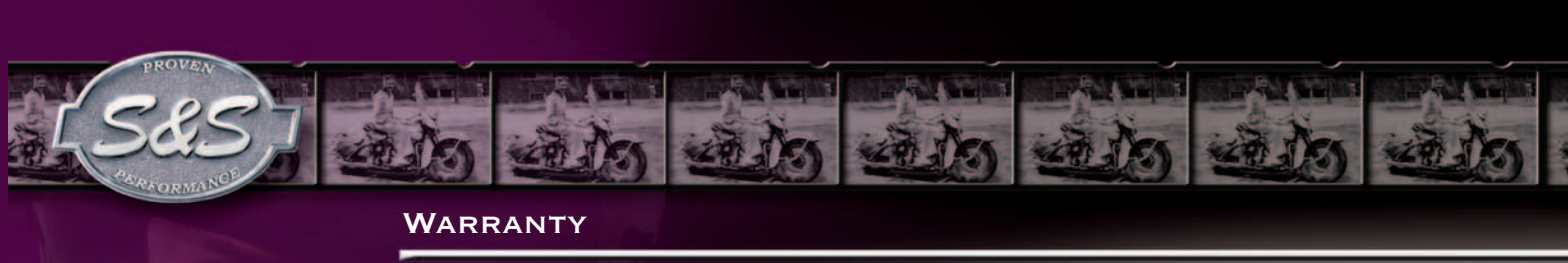
It is the responsibility of the original Consumer Purchaser to cease operation as soon as a defect or malfunction is identified or suspected. The failure to cease operation once a defect or malfunction exists can cause substantial damage to the Company's parts that could otherwise be avoided.

In addition, the Company shall have no obligation under this warranty for parts defects caused by alteration including, but not limited to, polishing; powdercoating; painting; removing or reconfiguring any components; modification, repair, or unauthorized service.

The Company shall have no obligation under this warranty if the parts are used in racing or similar competitive activities. The Company shall have no obligation under this warranty when a competition application, including but not limited to a turbocharger, supercharger or nitrous oxide, is used with the Engine. Further, the Company shall have no obligation under this warranty for any parts that are included in a Competition Package Option offered by the Company since the Package is for use in racing and similar competitive activities.

THE COMPANY SHALL NOT BE LIABLE FOR AND DISCLAIMS ALL CONSEQUENTIAL, INCIDENTAL, PUNITIVE OR SPECIAL DAMAGES ARISING OUT OF THE USE OF, OR INABILITY TO USE, THESE PARTS.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you.



Limited Warranty Complete Factory-Assembled Engines

Who Is Covered By This Warranty?

This warranty covers only the original Consumer Purchaser of the Complete Factory-Assembled Super Stock Engine (the "Engine") and is not transferable.

What Does This Warranty Cover?

S&S Cycle, Incorporated (the "Company") warrants this Engine to be free from defects in material and workmanship. If the Engine or any part thereof becomes defective during the warranty coverage period, the Company will, at its option, repair or replace the Engine or any, or all, defective parts. Repair or replacement of defective parts is the sole and exclusive remedy.

How Long Is The Warranty Coverage?

The warranty coverage remains in force for a period of twelve (12) months from the date that the original Consumer Purchaser buys the Engine. Engines specifically designed for and sold with the S&S Intelligent Spark Technology ignition system are covered by a special twenty four (24) month warranty. However, warranty coverage will automatically terminate if the original Consumer Purchaser sells or otherwise transfers all or any portion of the Engine.

What Is Not Covered by This Warranty?

The Company shall not pay or be responsible for the cost of shipping the defective Engine or part to the Company for service under this warranty, nor will the Company pay for the cost of labor to remove and/or replace the defective Engine or part.

Moreover, the Company shall have no obligation under this warranty in the event that the Engine becomes defective in whole or in part as a result of improper installation, break-in, maintenance, or use, or any other misuse or mistreatment of the Engine, including, without limitation, operation of the Engine with fuels, oils or lubricants not conforming to specifications published by the Company for use in or with the Engine or continued operation of the Engine after a defect or malfunction occurs or is identified or suspected.

The Company shall have no obligation under this warranty for defects in the Engine's black powdercoat finish, when that option is selected, if the defects are caused by, but not limited to, negligence of parties other than Company; an accident; ordinary wear and tear; assembly or disassembly; power washing; natural occurrences like stone chips; bead blasting; improper maintenance including the use of any harsh cleaning agent, chemical or solvent; and salt or other substances used on streets and highways for maintenance and safety. This warranty does not cover consumables, that is, those parts consumed in the normal operation of the Engine.

The Company provides touch-up paint with each powdercoated Engine. It is the customer's responsibility to repair minor finish damage to prevent or inhibit further deterioration.

It is the responsibility of the original Consumer Purchaser to cease operation as soon as a defect or malfunction is identified or suspected. The failure to cease operation once a defect or malfunction exists can cause substantial damage to the Engine that could otherwise be avoided.

In addition, the Company shall have no obligation under this warranty for defects in the Engine caused by alteration including, but not limited to, polishing; powdercoating; painting; removing or reconfiguring any components; modification, repair, or unauthorized service of the Engine.

The Company shall have no obligation under this warranty if the Engine is used in racing or similar competitive activities. The Company shall have no obligation under this warranty when a competition application, including but not limited to a turbocharger, supercharger or nitrous oxide, is used with the Engine. Further, the Company shall have no obligation under this warranty for any Engine that includes a Competition Package Option since the Package is for use in racing and similar competitive activities.

THE COMPANY SHALL NOT BE LIABLE FOR AND DISCLAIMS ALL CONSEQUENTIAL, INCIDENTAL, PUNITIVE OR SPECIAL DAMAGES ARISING OUT OF THE USE OF, OR INABILITY TO USE, THE ENGINE.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you.

What Must The Original Consumer Purchaser Do To Qualify For Warranty Coverage?

Within thirty (30) days after the date of purchase of the Engine, the original Consumer Purchaser must return a completed Owner's Registration Card along with a copy of the invoice evidencing such purchase to the Company at the following address:

S&S Cycle, Incorporated
Attention: Technical Services
14025 County Highway G P.O. Box 215
Viola, WI 54664-0215

Phone: 608-627-8324 • Fax: 608-627-0773
Email: sstech@sscycle.com
Direct Phone: 608-627-TECH (8324)

THIS WARRANTY IS VOIDABLE AT THE COMPANY'S OPTION IF THE ORIGINAL CONSUMER PURCHASER DOES NOT RETURN TO THE COMPANY THE OWNER REGISTRATION CARD AND A COPY OF THE INVOICE WITHIN THIRTY (30) DAYS FROM THE DATE OF PURCHASE OF THE ENGINE.

Limited Warranty Unassembled Engines

Who Is Covered By This Warranty?

This warranty covers only the original Consumer Purchaser of the Unassembled Engine, the Factory-Assembled Basic Engine or the Factory-Assembled Basic Engine With Options (the "Engine") and is not transferable.

What Does This Warranty Cover?

S&S Cycle, Incorporated (the "Company") warrants this Engine to be free from defects in material and workmanship. If the Engine or any part thereof becomes defective during the warranty coverage period, the Company will, at its option, repair or replace the Engine or any, or all, defective parts. Repair or replacement of defective parts is the sole and exclusive remedy.

How Long Is The Warranty Coverage?

The warranty coverage remains in force for a period of twelve (12) months from the date that the original Consumer Purchaser buys the Engine. However, warranty coverage will automatically terminate if the original Consumer Purchaser sells or otherwise transfers all or any portion of the Engine.

What Is Not Covered by This Warranty?

The Company shall not pay or be responsible for the cost of shipping the defective Engine or part to the Company for service under this warranty, nor will the Company pay for the cost of labor to remove and/or replace the defective Engine or part.

Moreover, the Company shall have no obligation under this warranty in the event that the Engine becomes defective in whole or in part as a result of improper assembly, installation, break-in, maintenance, or use, or any other misuse or mistreatment of the Engine, including, without limitation, operation of the Engine with fuels, oils or lubricants not conforming to specifications published by the Company for use in or with the Engine or continued operation of the Engine after a defect or malfunction occurs or is identified or suspected.

The Company shall have no obligation under this warranty for defects in the Engine's black powdercoat finish, when that option is selected, if the defects are caused by, but not limited to, negligence of parties other than Company; an accident; ordinary wear and tear; assembly or disassembly; power washing; natural occurrences like stone chips; bead blasting; improper maintenance including the use of any harsh cleaning agent, chemical or solvent; and salt or other substances used on streets and highways for maintenance and safety. This warranty does not cover consumables, that is, those parts consumed in the normal operation of the Engine.

The Company provides touch-up paint with each powdercoated Engine. It is the Consumer Purchaser's responsibility to repair minor finish damage to prevent or inhibit further deterioration.

It is the responsibility of the original Consumer Purchaser to cease operation as soon as a defect or malfunction is identified or suspected. The failure to cease operation once a defect or malfunction exists can cause substantial damage to the Engine that could otherwise be avoided.

In addition, the Company shall have no obligation under this warranty for defects in the Engine caused by alteration including, but not limited to, polishing; powdercoating; painting; removing or reconfiguring any components; modification, repair, or unauthorized service of the Engine.

The Company shall have no obligation under this Warranty if the Engine is used in racing or similar competitive activities. The Company shall have no obligation under this warranty when a competition application, including but not limited to a turbocharger, supercharger or nitrous oxide, is used with the Engine. Further, the Company shall have no obligation under this warranty for any Engine that includes a Competition Package Option since the Package is for use in racing and similar competitive activities.

THE COMPANY SHALL NOT BE LIABLE FOR AND DISCLAIMS ALL CONSEQUENTIAL, INCIDENTAL, PUNITIVE OR SPECIAL DAMAGES ARISING OUT OF THE USE OF, OR INABILITY TO USE, THE ENGINE.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you.

What Must The Original Consumer Purchaser Do To Qualify For Warranty Coverage?

Within thirty (30) days after the date of purchase of the Engine, the original Consumer Purchaser must return a completed Owner's Registration Card along with a copy of the invoice evidencing such purchase to the Company at the following address:

S&S Cycle, Incorporated
Attention: Technical Services
14025 County Highway G P.O. Box 215
Viola, WI 54664-0215

Phone: 608-627-8324 • Fax: 608-627-0773
Email: sstech@sscycle.com
Direct Phone: 608-627-TECH (8324)

THIS WARRANTY IS VOIDABLE AT THE COMPANY'S OPTION IF THE ORIGINAL CONSUMER PURCHASER DOES NOT RETURN TO THE COMPANY THE OWNER REGISTRATION CARD AND A COPY OF THE INVOICE WITHIN THIRTY (30) DAYS FROM THE DATE OF PURCHASE OF THE ENGINE.

Limited Warranty Return Authorization

What Are The Procedures To Obtain Service Under This Warranty?

To obtain service under this warranty, the original Consumer Purchaser should immediately contact the dealer where the Engine was purchased. The dealer will then contact the Company for a determination as to whether the defect in the Engine or part is covered by this warranty.

THE DEALER OR SERVICE PROVIDER MUST RECEIVE AUTHORIZATION FROM THE COMPANY BEFORE PROVIDING SERVICE UNDER THIS WARRANTY.

In the event that the Company determines the Engine or part must be returned to the Company for evaluation or service, the Company will provide the dealer with a Return Authorization Number to put on the shipping container for identification.

The original Consumer Purchaser or dealer must clean and properly package the Engine or part so as not to cause further damage and return the Engine or part, shipping costs prepaid, to the Company. The Return Authorization Number must be clearly visible on the outside of the shipping container. If the Engine or part must be cleaned prior to warranty inspection the cost of cleaning will be charged to the original Consumer Purchaser or dealer.

The original Consumer Purchaser or dealer must also send to the Company a detailed explanation of the relevant facts concerning the nature of the problem, the specific use of the Engine, and the circumstances giving rise to the defect or problem.

If it is not practicable to contact the dealer for warranty service, the original Consumer Purchaser may contact the Company at the following address, telephone number, fax number or e-mail address:

S&S Cycle, Incorporated
Attention: Technical Services
14025 County Highway G P.O. Box 215
Viola, WI 54664-0215

Phone: 608-627-8324 • Fax: 608-627-0773
Email: sstech@sscycle.com
Direct Phone: 608-627-TECH (8324)

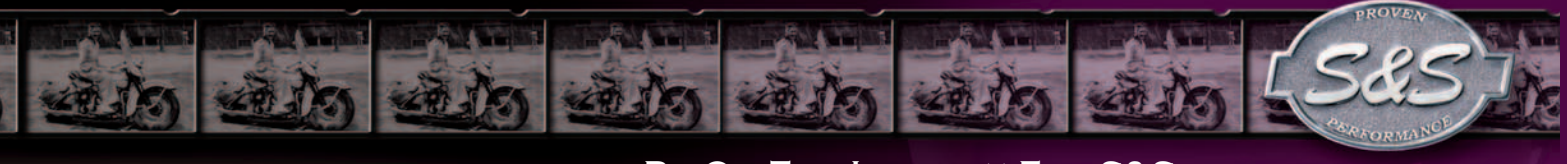
Are There Other Warranties?

THE WARRANTIES STATED IN THIS WARRANTY REPLACE ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ANY OTHER OBIGATIONS OR LIABILITIES ON THE PART OF THE COMPANY WHETHER IN CONTRACT, WARRANTY, NEGLIGENCE OR OTHERWISE, TO THE EXTENT NOT PROHIBITED BY LAW.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

How Do State Laws Relate To This Warranty?

This warranty gives you specific legal rights. You may also have other rights that vary from state to state.



Be On The Lookout For S&S

We've just updated our website!

If you haven't visited our website recently, you're in for a pleasant surprise. Direct your web browser to www.sscycle.com and get ready for an all new S&S web experience. The difference will be apparent immediately with an all new look, but the further you dig the more you'll find. There are little differences like the improved dealer locator. You can search for a dealer in your area or find an S&S VFI tuning center, and we will even provide you with a map showing you how to get there. But wait there's more!

The new searchable product catalog makes finding what you want quick and easy. Up to the minute online race results, an events calendar, events photos and videos, customer bike photos, tech tips, and forums are just some of the features that you'll find. But that's not all!

New to the S&S Website is an E-commerce area for apparel items. Check out our new apparel line! But now, if something catches your eye, you can order it online. Keep in mind that while we sell apparel items direct to consumers, engine parts are still available exclusively through S&S Dealers. Anybody can make a T-shirt work, but installing and using high performance equipment successfully requires the qualified, personal involvement and support of our dealer network.

Speaking of dealers, they have their own area on our website were they can check stock, place orders, and track orders on line 24/7 365 days a year.

S&S Tours...

are available Wednesday through Friday 11:00 A.M. - 3:00 P.M. Schedule a tour by calling 608-627-2080 Ext. 1363 or email sscust@sscycle.com.

Takin' It To The Streets!

During 2004, the S&S semi truck display made its way to all the major rallies around the continental United States. On display, were the fabulous 124 VFI Shoot out bikes. Built around the S&S 124 VFI SSW+ engine, these are some of the most beautiful custom bikes you could hope to see, but the best part about them is that they were built to ride! A successful road trip and heads-up drag racing showed that they could indeed be ridden and ridden fast. A celebratory, five bike, simultaneous burn out on the dance floor of the Broken Spoke Saloon in Sturgis wrapped up the 124 VFI Challenge, and a good time was had by all!

Keep and eye on the coming issues of Hot Bike Magazine for details of a totally new event for the 2005 riding season.

Event Schedule – Watch for the S&S Semi Display at the following events:

Daytona Bike Week
March 5- 12, 2005
Daytona International Speedway

Myrtle Beach Rally
May 14-21, 2005
Broadway at the Beach, Myrtle Beach SC

Sturgis Motorcycle Rally
August 6-13. 2005
1535 Lazelle Street Sturgis, SD

Laughlin River Run
April 20-23, 2004
Riverside Hotel & Casino, Laughlin NV

Laconia Bike Rally
June 11-18 2005
Meredith Harley-Davidson, Meredith NH

Suggested Retail Pricing in the Continental United States

Part No.	Description	Suggested Retail Price
11-0100	Carb kit w/o manifold, Super B	$374.95
11-0104	Carb kit, Super B - 1957-'78 XL	$384.95
11-0105	Carb kit, Super B - 1979-'82 XL	$398.60
11-0111	Carb assembly, Super B	$289.10
11-0115	Carb kit, Super B - 1986-'90 XL	$420.05
11-0120	Carb kit, Super B - 1983-'85 XL	$401.65
11-0404	Carb kit, Super E - 1957-'78 XL	$416.65
11-0406	Carb kit, Super E - 1979-'85 XL	$427.75
11-0408	Carb kit, Super E - 1986-'90 XL	$446.20
11-0409	Carb kit, Super E - 1991-2003 XL	$454.70
11-0424	Carb kit, Super G - 1957-'78 XL	$427.75
11-0426	Carb kit, Super G - 1979-'85 XL	$438.85
11-0428	Carb kit, Super G - 1986-'90 XL	$457.75
11-0429	Carb kit, Super G - 1991-2003 XL	$466.15
11-0448	Carb kit, Super E - 1994-2002 Buell	$517.50
11-0449	Carb kit, Super G - 1994-2002 Buell	$524.65
11-7100	Jet, intermediate - 3 pack - all Super gas (series 94)	$19.90
11-7101	Intermediate jet - 1 each: .0265, .028, .0295 - all Super gas	$19.90
11-7102	Intermediate jet - 1 each: .028, .0295, .031 - all Super gas	$19.90
11-7103	Intermediate jet - 1 each: .0295, .031, .032 - all Super gas	$19.90
11-7104	Intermediate jet - 1 each: .031, .032, .033 - all Super gas	$19.90
11-7105	Intermediate jet - 1 each: .032, .033, .036 - all Super gas	$19.90
11-7106	Intermediate jet - 1 each: .033, .036, .040 - all Super gas	$19.90
11-7200	Main jet - 1 each: .062, .064, .066, .068, .070, .072	$11.40
11-7201	Main jet - 1 each: .066, .068, .070, .072, .074, .076	$11.40
11-7202	Main jet - 1 each: .072, .074, .076, .078, .080, .082	$11.40
11-7203	Main jet - 1 each: .078, .080, .082, .084, .086, .088	$11.40
11-7204	Main jet - 1 each: .090,.092, .094, .096, .098	$9.50
11-7205	Main jet - 1 each: .100, .102, .104, .106, .108	$9.50
11-7270	Jet kit, low range - engines up to 93"/96"	$39.80
11-7271	Jet kit, high range - engines 93"/96" & up	$39.80
11-7272	Jet kit, master - all engines	$68.65
17-0004	Cover, air cleaner, Super E & G, slotted, SSW+	$82.35
17-0045	Air cleaner kit, tall, element and spacers	$41.15
17-0055	Element, air cleaner, tall	$15.40
17-0099	Air cleaner assembly - 1955-'84 BT, 1957-'85 XL w/GBL, GAL, Super B	$101.95
17-0105	Air cleaner assembly - 1994-2002 Buell w/stock CV carb	$158.25
17-0107	Air cleaner assembly - 1984-up V² w/Super A, B	$130.35
17-0108	Air cleaner assembly - 1984-up V² w/stock butterfly type carb	$129.15
17-0117	Air cleaner assembly - 1993-up BT (V²&TC), 1991-2003 XL- w/stock CV carb	$188.45
17-0198	Air cleaner assembly - Super D	$113.35
17-0199	Air cleaner assembly - 1966-'84 BT, 1966-'85 XL w/L series, stock butterfly type carb	$103.45
17-0385	Cover, air cleaner - Super E & G, U.S. Flag	$97.80
17-0399	Air cleaner assembly, Super E, G - 1984-'92 BT, 1986-'90 XL (after 3-'94)	$131.45
17-0400	Air cleaner assembly, Super E, G - 1936-'84 BT, 1957-'85 XL	$113.15
17-0402	Air cleaner assembly, Super E, G - 1994-2002 Buell	$166.25
17-0404	Air cleaner assembly, Super E, G - 1993-'99 V² BT (after 2-'01)	$148.95
31-0302	Gearcover kit, crankcase, bushing style - 1986-'90 XL	$393.10
31-0303	Gearcover kit, crankcase, bushing style - 1991-'99 XL	$393.10

Suggested Retail Pricing in the Continental United States

Part No.	Description	Suggested Retail Price
31-1008	Crankcase assembly - stock bore - 1991-2003 cam geometry - XL/Buell	$2,212.25
31-1009	Crankcase assembly - 3⅝" bore - 1991-2003 cam geometry - XL/Buell	$2,212.25
31-1013	Crankcase assembly - stock bore - 1986-'90 cam geometry - XL/Buell	$2,212.25
31-1014	Crankcase assembly - 3⅝" bore - 1986-'90 cam geometry - XL/Buell	$2,212.25
31-2099	Gasket, gearcover - 1986-up XL - 5 pack	$14.95
31-4114	Seal, gearcover cam oil - 1971-up XL - 5 pack	$39.95
31-9299	Engine, Complete - 100" S&S Sportster Style	(Price varies with options selected)...Call for pricing
31-9300	Engine, Complete - 91" S&S Buell Style	(Price varies with options selected)...Call for pricing
31-9301	Engine, Complete - 100" S&S Buell Style	(Price varies with options selected)...Call for pricing
31-9302	Engine, Complete - 91" S&S Sportster Style	(Price varies with options selected)...Call for pricing
32-3089	Hot Setup, 89" - 4⅝" F (92-1900) - 1986-2003 XL	$2,194.95
32-3772	Stroker kit, 72" - 4½", 8:1CR F (92-3700) - 1972-'85 XL	$368.00
32-3774	Stroker kit, 74" - 4⅝", 9:1CR F (92-3700) - 1972-'85 XL	$368.00
33-5081	Cam set, 500 (Andrews V6) - 1986-'90 XL	$280.75
33-5082	Cam set, 500 (Andrews V6) - 1991-2003 XL	$280.75
33-5083	Cam set, 555 (Andrews V9) - 1986-'90 XL	$280.75
33-5084	Cam set, 555 (Andrews V9) - 1991-2003 XL	$280.75
33-5352	Tappet set, hydraulic - 1984-'99 BT, 1986-'90 XL	$199.95
33-5353	Tappet set, hydraulic, w/ HL_2T - 1984-'99 BT, 1986-'90 XL	$214.95
33-5355	Adapter, pushrod cover - 1991-2003 XL (set of 4)	$24.95
33-5361	Tappet guide assembly, - FE - 1986-'90 cams - S&S XL	$55.10
33-5362	Tappet guide assembly, - FI - 1986-'90 cams - S&S XL	$55.10
33-5363	Tappet guide assembly, - RE - 1986-'90 cams - S&S XL	$55.10
33-5364	Tappet guide assembly, - RI - 1986-'90 cams - S&S XL	$55.10
33-5365	Tappet guide set - 1986-'90 cams - S&S XL	$220.20
33-5369	Tappet guide set - 1991-2003 cams - S&S XL	$220.20
33-5371	Tappet guide assembly, - FE - 1986-'90 XL (HD#18616-86)	$55.10
33-5372	Tappet guide assembly, - FI - 1986-'90 XL (HD#18617-86)	$55.10
33-5373	Tappet guide assembly, - RE - 1986-'90 XL (HD#18618-86)	$55.10
33-5374	Tappet guide assembly, - RI - 1986-'90 XL (HD#18619-86)	$55.10
33-5375	Tappet guide set - 1986-'90 XL	$220.20
33-5381	Tappet guide assembly, - FE/FI - 1991-2003 cams - S&S XL	$55.10
33-5383	Tappet guide assembly, - RE/RI - 1991-2003 cams - S&S XL	$55.10
33-5385	Tappet guide assembly, - FE/FI - 1991-2003 XL	$55.70
33-5387	Tappet guide assembly, - RE/RI - 1991-2003 XL	$55.10
33-5389	Tappet guide set - 1991-2003 XL	$220.20
50-0333	Cover set, S&S head bolt, chrome	$49.95
50-8077	O-ring - ⅜" ID x ½" OD x 1⁄16" CS 70 Buna (cylinder vent fitting,upper tappet block. 1986-'90 XL) - 10 pack	$5.40
50-8079	O-ring - 1" ID x 1 3⁄16" OD x 3⁄32" CS Viton (HD#11167A) (upper tappet block. 1986-'90 XL) - 10 pack	$14.95
50-8087	O-ring - 1" ID x 1⅛" OD x 1⁄16" CS Viton (HD#11168A) (lower tappet block. 1986-'90 XL) - 10 pack	$9.40
50-8153	Kit, o-ring, S&S XL tappet blocks	$11.90
53-0040	Set, rocker cover allen wrench	$77.20
53-0452	Wrench, main jet (72 main jet)	$10.85
55-1007	Calibration unit, electronic speedometer - all models w/electronic speedo.	$123.55
55-6008	Kit, muffler, slip-on - 1987-'03 XL	$249.95
55-6031	Kit, muffler, slip-on - 2004-up XL	$299.95
55-6500	Hot set-up kit, air cleaner & exhaust - 1987-'03 XL	$484.95
55-6501	Hot set-up kit, air cleaner & exhaust - 2004-up XL	$529.95
90-0324	Top end kit, 79" SS - .630" lift", 11.1CR F (92-1100) - 1994-'98 Buell	$1,799.95

Suggested Retail Pricing in the Continental United States

Part No.	Description	Suggested Retail Price
90-0325	Hot Set Up kit, 74" SS - 3 13/16" - 1991-2003 1200 XL	$1,924.95
90-0326	Hot Set Up kit, black, 74" SS - 3 13/16" - 1986-90 1200 XL	$1,869.95
90-0327	Hot Set Up kit, black, 74" SS - 3 13/16" - 1991-2003 1200 XL	$1,994.95
90-0352	Hot Set Up kit, 89" SS - 4 5/16", 10.3:1CR F (92-1120) - 1991-2003 XL	$3,444.95
90-0389	Hot Set Up kit, 89" SS - 4 5/16", 9.5:1CR F (92-1060) - 1986-2003 XL	$3,444.95
90-1302	Head kit, cylinder - stock pattern SS, .630" lift - 1986-'90 XL	$1,003.00
90-1302F	Head assembly, front cylinder - stock pattern SS, .630" lift - 1986-'90 XL	$601.80
90-1302R	Head assembly, rear cylinder - stock pattern SS, .630" lift - 1986-'90 XL	$601.80
90-1305	Head kit, cylinder - stock pattern SS, .630" lift - 1994-2002 Buell XL	$997.20
90-1305F	Head assembly, front cylinder - stock pattern SS, .630" lift - 1994-2002 Buell XL	$598.30
90-1305R	Head assembly, rear cylinder - stock pattern SS, .630" lift - 1994-2002 Buell XL	$598.30
90-1310	Head kit, cylinder - stock pattern SS, .630" lift - 1991-2003 XL	$1,003.00
90-1310F	Head assembly, front cylinder - stock pattern SS, .630" lift - 1991-2003 XL	$601.80
90-1310R	Head assembly, rear cylinder - stock pattern SS, .630" lift - 1991-2003 XL & Buell	$601.80
90-1802	Head kit, cylinder, Black - stock pattern SS, .630" lift - 1986-'90 XL	$1,073.00
90-1802	Head kit, cylinder, Black - stock pattern SS, .630" lift - 1986-'90 XL	$1,073.00
90-1802F	Head assembly, front cylinder, Black - stock pattern SS, .630" lift - 1986-'90 XL	$643.80
90-1802R	Head assembly, rear cylinder, Black - stock pattern SS, .630" lift - 1986-'90 XL	$643.80
90-1805	Head kit, cylinder, Black - stock pattern SS, .630" lift - 1994-2002 Buell	$1,067.20
90-1805F	Head assembly, front cylinder, Black - stock pattern SS, .630" lift - 1994-2002 Buell	$640.30
90-1805R	Head assembly, rear cylinder, Black - stock pattern SS, .630" lift - 1994-2002 Buell	$640.30
90-1810	Head kit, cylinder, Black - stock pattern SS, .630" lift - 1991-2003 XL	$1,073.00
90-1810F	Head assembly, front cylinder, Black - stock pattern SS, .630" lift - 1991-2003 XL	$643.80
90-1810R	Head assembly, rear cylinder, Black - stock pattern SS, .630" lift - 1991-2003 XL & Buell	$643.80
90-1907	Gasket kit, cylinder - 3½" XL	$26.35
90-1908	Gasket kit, cylinder - 3⅝" XL	$26.35
90-2077	Spring kit, valve - .640" lift steel top collar - 1984-up V², 1999-up TC, TCB BT	$111.45
90-2078	Spring kit, valve - .640" lift tit. top collar - 1984-up V², 1999-up TC, TCB BT	$164.30
90-4006	Shaft, rocker arm - all V² (HD#17611-83)	$7.35
90-4014	Bushing, rocker arm - V²	$2.50
90-4036	Shaft set, rocker arm - 1984-up V²	$29.20
90-4049	Gasket set, rocker cover - billet - 1984-up V²	$44.85
90-4050	Kit, rocker cover - chrome billet - 1984-'99 V²	$866.85
90-4055	Kit, rocker cover - plain billet - 1984-'99 V²	$624.25
90-4065	Arm set, roller rocker - 1984-up V²	$389.95
90-4065F	Arm assembly, roller rocker - FE/RI - 1984-up V²	$116.95
90-4065R	Arm assembly, roller rocker - RE/FI - 1984-up V²	$116.95
90-4080	Kit, rocker cover - polished billet - 1984-'99 V²	$735.75
90-4083	Kit, rocker cover - plain die cast - 1984-'99 V²	$281.65
90-4090	Kit, rocker cover - polished die cast - 1984-'99 V²	$387.05
90-4091	Gasket set, rocker cover - die cast - 1984-'99 V²	$48.65
90-4095	Kit, rocker cover - chrome die cast - 1984-'99 V²	$559.95
90-4104	Kit, rocker arm rebuild (90-4065)	$102.95
90-4119	Arm set, rocker - 1984-up V²	$174.95
90-4119F	Arm assembly, rocker - FE/RI - 1984-up V²	$52.50
90-4119R	Arm assembly, rocker - RE/FI - 1984-up V²	$52.50
91-3002	Cylinder kit, 79" SW - 3 13/16", 9.2:1 or 11.0:1 CR F (92-1940) - 1986-2003 XL	$668.40
91-3012	Cylinder kit - 3½" x 3 13/16" 10.5:1CR (4.650") SSF (92-2056) - 1986-2003 883 XL	$759.10
91-3014	Cylinder kit - 3½" x 3 13/16" 10.5:1CR (4.650") SSF (92-2016) - 1986-2003 XL	$712.80

Suggested Retail Pricing in the Continental United States

Part No.	Description	Suggested Retail Price
91-3204	SW kit, 89" - 4⅝", 9.5:1 or 10.2:1CR F (92-1940) - 1986-'90 XL	$1,774.95
91-3206	SW kit, 89" - 4⅝", 9.5:1 or 10.2:1CR F (92-1940) - 1991-2003 XL	$1,774.95
91-3504	SW kit, 103" - 5", 10.5:1 or 11.8:1CR F (92-1940) - 1986-'90 XL	$1,784.95
91-3506	SW kit, 103" - 5", 10.5:1 or 11.8:1CR F (92-1940) - 1991-2003 XL	$1,784.95
91-3906	Cylinder kit, Black - 3½" x 3 13/16" 10.5:1CR (4.650") SSF (92-2056) - 1986-2003 883 XL	$844.10
91-3908	Cylinder kit, Black - 3½" x 3 13/16" 10.5:1CR (4.650") SSF (92-2016) - 1986-2003 XL	$797.80
92-2016	Piston set, 3½" std. - 4⅝",12.5:1 – 3 13/16",10.5:1 SSFDF - 1984-up V²	$236.45
92-20165	Piston set, 3½" +.005" - 4⅝",12.5:1 – 3 13/16",10.5:1 SSFDF - 1984-up V²	$236.45
92-2017	Piston set, 3½" +.010" - 4⅝",12.5:1 – 3 13/16,10.5:1 SSFDF - 1984-up V²	$236.45
92-2018	Piston set, 3½" +.020" - 4⅝",12.5:1 – 3 13/16",10.5:1 SSFDF - 1984-up V²	$236.45
92-2019	Piston set, 3½" +.030" - 4⅝",12.5:1 – 3 13/16",10.5:1 SSFDF - 1984-up V²	$236.45
92-2036	Piston set, 3½" std. - 4⅝",10.9:1 – 3 13/16",9.2:1 SSRDF - 1984-up V²	$244.60
92-20565	Piston set, 3½" +.005" - 883,10.5:1 SSFDF - 1986-up XL	$288.70
92-2056	Piston set, 3½" std. - 883,10.5:1 SSFDF - 1986-up XL	$288.70
92-2057	Piston set, 3½" +.010" - 883,10.5:1 SSFDF - 1986-up XL	$288.70
92-2058	Piston set, 3½" +.020" - 883,10.5:1 SSFDF - 1986-up XL	$288.70
92-2059	Piston set, 3½" +.030" - 883,10.5:1 SSFDF - 1986-up XL	$288.70
92-2446	Piston kit, 3½" std. - 883,9.25:1 RDC - 1986-up XL	$214.15
92-24465	Piston kit, 3½" +.005" - 883,9.25:1 RDC - 1986-up XL	$214.15
92-2447	Piston kit, 3½" +.010" - 883,9.25:1 RDC - 1986-up XL	$214.15
92-2448	Piston kit, 3½" +.020" - 883,9.25:1 RDC - 1986-up XL	$214.15
92-2449	Piston kit, 3½" +.030" - 883,9.25:1 RDC - 1986-up XL	$214.15
92-3701	Piston set, 3⅜" +.010" - 4 7/16"-4 13/16", 7.25:1-9:1 F - 1972-'85 XL	$226.55
92-3702	Piston set, 3⅜" +.020" - 4 7/16"-4 13/16", 7.25:1-9:1 F - 1972-'85 XL	$226.55
92-3703	Piston set, 3⅜" +.030" - 4 7/16"-4 13/16", 7.25:1-9:1 F - 1972-'85 XL	$226.55
92-3704	Piston set, 3⅜" +.040" - 4 7/16"-4 13/16", 7.25:1-9:1 F - 1972-'85 XL	$226.55
92-3705	Piston set, 3⅜" +.050" - 4 7/16"-4 13/16", 7.25:1-9:1 F - 1972-'85 XL	$226.55
92-3706	Piston set, 3⅜" +.060" - 4 7/16"-4 13/16", 7.25:1-9:1 F - 1972-'85 XL	$226.55
92-3707	Piston set, 3⅜" +.070" - 4 7/16"-4 13/16", 7.25:1-9:1 F - 1972-'85 XL	$226.55
92-3708	Piston set, 3⅜" +.080" - 4 7/16"-4 13/16", 7.25:1-9:1 F - 1972-'85 XL	$226.55
93-4059	Mount, isolator to head, stock engine height - 1996-2002 Buell	$321.45
93-4060	Mount, isolator to head, S&S 100" engine height - 1996-2002 Buell	$321.45
93-4061	Mount, isolator to head, special order - 1996-2002 Buell	$321.45
93-4062	Mount, top motor, slotted steel - 1996-2002 Buell	$83.65
93-5022	Pushrod set, adjustable - steel +7/16" 1986-'90 XL/std. 1991-up XL	$86.95
93-5025	Pushrod set, adjustable - +1.100" steel - 1986-'90 XL	$86.95
93-5033	Pushrod set, adjustable - std. steel - 1986-'90 XL	$86.95
93-5036	Pushrod set, adjustable - Special Order steel - 1986-up XL	$103.40
93-5037	Pushrod set, non-adjustable - std. steel - 1957-'85 XL	$38.55
93-5038	Pushrod set, non-adjustable - Special Order steel - 1957-'85 XL	$55.00
93-5088	Pushrod set, adjustable - +1.100" steel - 1991-up XL	$86.95
93-5089	Pushrod set, adjustable - +7/16" steel - 1991-up XL	$86.95
93-5130	Pushrod set, quickee - 883-89" - 1991-up V² XL	$169.95
93-5131	Pushrod set, quickee - 883-89" - 1989-'90 V² XL	$169.95
93-5132	Pushrod set, quickee - 103" - 1984-'99 V² BT, 1986-'90 V2 XL	$169.95
93-5133	Pushrod set, quickee - 103" - 1991-up V² XL	$169.95
93-5135	Pushrod set, quickee - special order	$199.95

S&S Cycle invites you to join...

11-Second Club

Are you fast enough?

Here's how you can join some fast company.

- First, go fast -- after breaking in your engine according to the manufacturer's instructions.
- Next, provide the documentation listed below.
- Then, toss everything in an envelope and send it to S&S.
- We'll send you an official 11-Second Club patch for your leathers or denims, a certificate authorizing braggin' rights, and a free 11-Second Club T-shirt.

Here's what we need from you:

1. Proof that your street-ridden motorcycle (D.O.T. tires, full charging system, no wheelie bars or air shifts) equipped with one of our carburetors and, hopefully, numerous other S&S products, has turned an 11.99 or quicker quarter-mile time. We'll need an official timing slip from a sanctioned dragstrip dated after June 1, 1997 and signed by the timekeeper. (A good photocopy will do.) We don't care if you trailer the bike to the track, so long as it sees more action on the street than off.

2. A photograph of yourself, anyone else you'd care to include, and the motorcycle. Action shots are preferred if sharp and clear, but the carburetor **MUST** be in plain view.

3. A signed copy of this statement:

Please tell us a little about yourself and your motorcycle.
Included the model and year, a list of all engine and frame modifications, the type of exhaust, and tire brand and model.
Be sure to mention all S&S products used!

Submitted materials may be used for promotional purposes.
Members will receive a 11- Second Club certificate, patch, and T-shirt, but no payment or other considerations.

I do hereby attest that I have fulfilled all membership requirements of the S&S Cycle 11-Second Club as outlined above and that my motorcycle is fully licensed for use on all city, state and federal highways. I also attest that starting is self-contained or by kickstart, requiring no external mechanical devices, and that this motorcycle is ridden more often on the street than the racetrack. I understand that some risk to rider and equipment is present in all forms of motorcycle racing and do hereby accept all risks and liabilities associated therewith.

_____ Signature

_____ Date

_____ T-Shirt Size

Please include a few words about yourself and your motorcycle. Include the model and year, a list of engine and frame modifications, displacement, compression ratio, type of exhaust, and tire brand. Be sure to mention any S&S products used!

Send inquiries and membership applications to: 11-Second Club, Attention: Carla Langyel
S&S Cycle, Inc. • 14025 County Hwy. G Box 215 • Viola, Wisconsin 54664 USA
Please allow 4 weeks for processing.

S&S Cycle invites you to join...

10-Second Club

Are you fast enough?

Continuing in the spirit of the 11-Second Club...

The 10-Second Club is for registered and licensed street motorcycles with S&S carbs. No wheelie bars are permitted. D.O.T. tires, full charging systems, lighting, and self-contained starters are required. Any chassis or engine modifications compatible with legitimate street-use are permitted. Mufflers are between you and the authorities, but the motorcycle must be street-ridden on a regular basis.

Here's what we need to welcome you in:

1. Proof that your street-ridden motorcycle is equipped with one of our carburetors and, hopefully, other S&S products as well, has turned a 10.999 or quicker quarter mile. Send either the original or a good photocopy of an official timing slip from a sanctioned dragstrip; it must be dated after 01/01/99 and signed by the timekeeper. The registered owner must ride the motorcycle for the qualifying pass.
2. Your t-shirt size and a photograph of yourself and the motorcycle. The carburetor must be in plain view.
3. A signed and dated copy of the statement below.

Please tell us a little about yourself and your motorcycle.
Included the model and year, a list of all engine and frame modifications, the type of exhaust, and tire brand and model.
Be sure to mention all S&S products used!

Submitted materials may be used for promotional purposes. Members will receive a certificate, club patch, and t-shirt, but no payment or other considerations

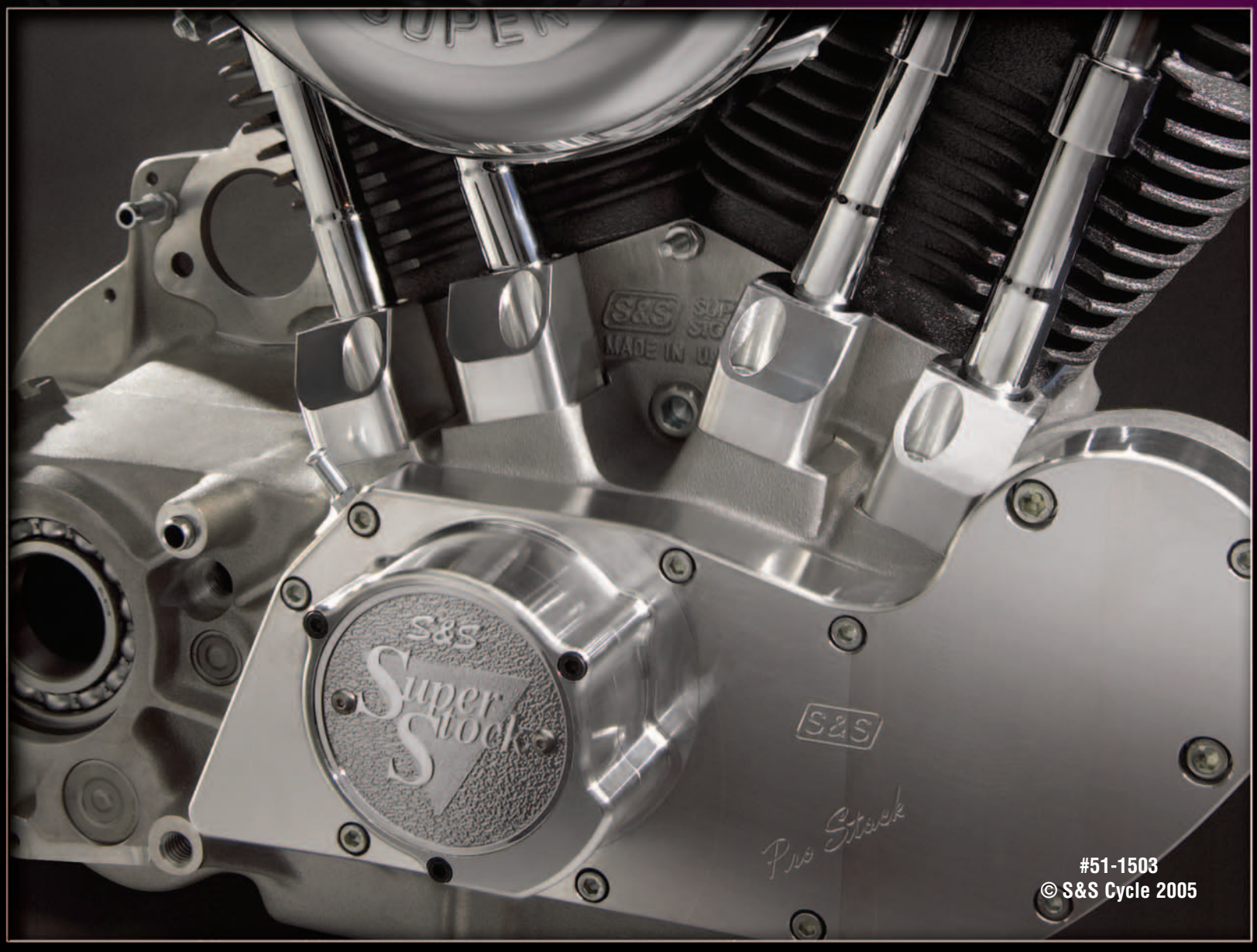
I do hereby attest that I have fulfilled all membership requirements of the S&S Cycle 10-Second Club as outlined above and that my motorcycle is fully licensed for use on all city, state and federal highways. I also attest that starting is self-contained or by kickstart, requiring no external mechanical devices, and that this motorcycle is ridden more often on the street than the racetrack. I understand that some risk to rider and equipment is present in all forms of motorcycle racing and do hereby accept all risks and liabilities associated therewith.

_____ _____ _____

Signature *Date* *T-Shirt Size*

Please include a few words about yourself and your motorcycle. Include the model and year, a list of engine and frame modifications, displacement, compression ratio, type of exhaust, and tire brand. Be sure to mention any S&S products used!

Send inquiries and membership applications to: 11-Second Club, Attention: Carla Langyel
S&S Cycle, Inc. • 14025 County Hwy. G Box 215 • Viola, Wisconsin 54664 USA
Please allow 4 weeks for processing.



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S&S Cycle, Inc.

14025 County Hwy. G · Viola, Wisconsin 54664
Phone: 608-627-2080 Email: sscust@sscycle.com Website: www.sscycle.com